



**CONESTOGA-ROVERS  
& ASSOCIATES**

912265  
200 W. Allegan Street, Suite 330  
Plainwell, Michigan 49080  
Telephone: (269) 685-5181 Fax: (269) 685-5223  
www.CRAworld.com

## MEMORANDUM

TO: Sheila Desai, U.S. EPA REF. NO.: 056394-05-0007

FROM: Greg Carli/Jeni Quigley/ejh/14/Pwl. DATE: November 16, 2012

CC: Paul Bucholtz, MDEQ  
Jeffrey Lifka, SulTRAC  
Richard Gay, Weyerhaeuser

RE: **Revised Summary of Additional Remedial Investigation Activities  
PCB-Impacted Soil in the Area of MW-16  
Former Plainwell, Inc. Mill Property  
Plainwell, Michigan**

### 1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA), on behalf of Weyerhaeuser Company (Weyerhaeuser), conducted additional Remedial Investigation (RI) activities on the northeastern portion of the Site, in the vicinity of monitoring well MW-16, at the former Plainwell, Inc. Mill Property located at 200 Allegan Street in Plainwell, Michigan (Site). Figure 1 presents the Site layout.

On April 20, 2012, Weyerhaeuser submitted a revised RI Report for the Site in accordance with the RI/Feasibility Study (FS) Work Plan dated July 2009, the Phase II RI Work Plan dated November 20, 2009, the Statement of Work (SOW) for the RI/FS, and the terms of the consent decree for the Design and Implementation of Certain Response Actions at Operable Unit No. 4 and the Plainwell, Inc. Mill Property Operable Unit No. 7 of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site (Consent Decree), which became effective February 22, 2005. The revised RI Report provided recommendations for additional activities to be completed at the Site to address potential data gaps including the delineation of polychlorinated biphenyl (PCB) impacts identified in soil in the vicinity of MW-16 during the RI.

The additional RI activities summarized in this memorandum were conducted on the northeastern portion of the Site in redevelopment area Commercial Area 4, in the vicinity of monitoring well MW-16, in accordance with the *Work Plan for Additional Remedial Investigation Activities* (Work Plan), submitted to the United States Environmental Protection Agency (U.S. EPA) on May 7, 2012. Approval to initiate this portion of the activities included in the Work Plan was provided by U.S. EPA via email on March 28, 2012.

### 2.0 SCOPE OF WORK

The Scope of Work (SOW) for the additional investigation in the vicinity of MW-16 included the advancement of soil borings and the collection and analysis of soil samples. Additionally, during the implementation of the additional investigation, MW-16 was modified from a stick-up well to a flush mount well, to accommodate the on-going redevelopment activities at the Site. The investigation field work adhered to the methods and procedures specified in the Phase II RI Work Plan dated November 20, 2009, as approved by the U.S. EPA on January 19, 2010. Additionally, the SOW included the laboratory analysis of

REGISTERED COMPANY FOR  
**ISO 9001**  
ENGINEERING DESIGN

soil samples consistent with the protocols set forth in the Multi-Area Quality Assurance Project Plan (QAPP) dated May 13, 2010 and the Multi-Area Field Sampling Plan (FSP) dated November 20, 2009, submitted to the U.S. EPA under separate cover.

## **2.1 SOIL BORING INSTALLATION**

Nine soil borings (SB-2016 through SB-2024), including one adjacent to MW-16, and at a maximum of 10 feet to the north, south, east, and west of MW-16, were advanced utilizing Geoprobe™ direct push technology with continuous macrocore sampling. One of the soil borings (SB-2020) was advanced adjacent to MW-16 to evaluate additional soil intervals in this location beyond those collected during the RI. The remainder of the initial soil borings was advanced on an approximate 10-foot grid to the north, northeast, northwest, east, west, south, southeast, and southwest of MW-16/SB-2020. An additional six soil borings (SB-2025 through SB-2030) were advanced 10 feet to the north and south of the initial borings. Figure 2 presents the soil boring locations. Soil borings were advanced to 10 feet below ground surface (bgs). Groundwater was encountered between 8 and 10 feet bgs in several of the borings; however, no groundwater samples were collected as part of this investigation. Stratigraphic soil boring logs are presented in Attachment A.

Soil samples were collected continuously at 2-foot intervals, logged, examined by a CRA field technician for visual/olfactory evidence of impact, and screened with a photoionization detector (PID), in accordance with the Phase II RI Work Plan.

Upon completion of soil sample collection, the soil borings were abandoned by backfilling the soil boring annulus with bentonite chips to the ground surface and properly hydrating.

A detailed description of the field methods and procedures utilized was provided in the Phase II RI Work Plan.

## **2.2 SAMPLING PROCEDURES**

All sampling was performed in accordance with the procedures outlined below and in a manner consistent with the QAPP and the FSP. Analytical protocols and parameters are presented in Section 3.0. Table 1 presents a Sample Collection and Analysis Summary.

### **2.2.1 SOIL SAMPLE COLLECTION**

A total of 73 soil samples, including Quality Assurance/Quality Control (QA/QC) samples, were collected during the investigation. Soil samples were collected to represent each 2-foot interval (0 to 2 feet, 2 to 4 feet, 4 to 6 feet, 6 to 8 feet, and 8 to 10 feet) from the ground surface to total depth of the borings, with the exception of SB-2020. Samples were collected from the 4- to 6-foot, 6- to 8-foot, and 8- to 10-foot intervals only from SB-2020.

Soil samples were placed into pre-cleaned laboratory provided containers, labeled, and submitted to the laboratory under chain-of-custody (COC) protocol. A detailed description of the field methods and procedures utilized is provided in the Phase II RI Work Plan.

### 2.3 DECONTAMINATION

Upon mobilization to the Site and prior to drilling commencement, the drill rig and all associated equipment were thoroughly cleaned using a high-pressure, low-volume steam wash and inspected. The drill rig and other associated equipment were also decontaminated between boring locations to prevent cross-contamination.

All non-disposable sampling equipment were decontaminated prior to each use by using an Alconox wash, potable water rinse, followed by a deionized water rinse and allowed to air dry.

All generated decontamination water was visually examined and screened with a PID. Decontamination water was containerized in a Department of Transportation (DOT) -approved 55-gallon drum for future characterization and disposal.

### 2.4 MW-16 MODIFICATION

In support of the on-going redevelopment activities in this area of the Site, MW-16 was converted from a stick-up construction well to a flush mount construction well.

The exterior protective casing was removed and the polyvinyl chloride (PVC) pipe was cut to depth. Subsequent to modification, the top of riser was surveyed, consistent with the protocols in the Phase II RI Work Plan.

Removed well construction materials were containerized, along with personnel protection equipment (PPE) (i.e., gloves, etc.) in a DOT-approved 55-gallon drum for future characterization and disposal.

### 2.5 MANAGEMENT OF INVESTIGATION-DERIVED WASTE (IDW)

IDW generated during the implementation of this investigation was managed and characterized, consistent with the protocols set forth in the Multi-Area FSP. The IDW generated during this investigation will be properly disposed off Site upon receipt and review of waste characterization data.

### 3.0 ANALYTICAL PROTOCOLS

Soils samples collected from the 0- to 2-foot, 2- to 4-foot, 4- to 6-foot, 6- to 8-foot, and 8- to 10-foot intervals from the borings north, south, east, and west of MW-16 (SB-2016 to SB-2019 and SB-2021 to SB-2024) were submitted for laboratory analysis of PCBs on an accelerated 1-week turnaround time (TAT). Soil samples collected from the 6- to 8-foot and 8- to 10-foot intervals from these borings were submitted to the laboratory on hold, pending the results of the upper intervals. The soil samples collected from the 4- to 6-foot and 6- to 8-foot intervals from the boring adjacent to MW-16 (SB-2020) were also submitted for laboratory analysis of PCBs on an accelerated 1-week TAT. The sample collected from the 8- to 10-foot interval was submitted to the laboratory on hold, pending the results for the upper intervals. All of the soil samples collected from borings SB-2025 through SB-3030 were submitted to the laboratory on hold, pending the results of the samples collected from the initial borings. The samples placed on hold were subsequently analyzed for PCBs on a standard 2-week TAT.

All samples, including QA/QC samples, were collected and analyzed according to the protocols set forth in the Phase II RI Work Plan and QAPP.

#### 4.0 ANALYTICAL DATA EVALUATION

Upon receipt of final analytical data, the data was subjected to the data validation procedures set forth in the QAPP. A copy of the data validation memorandum is presented as Attachment B to this memorandum.

Analytical results for the soil samples collected during the additional RI activities were evaluated against the Generic Cleanup Criteria and Screening Levels established in Part 7 of Administrative Rules, effective March 25, 2011, pursuant to Part 201, Environmental Remediation, 1994 PA 451 as amended (Part 201 Cleanup Criteria). Table 2 presents a summary of analytical results for soil samples collected during this investigation and for samples collected during the RI from MW-16 compared to the Part 201 Cleanup Criteria. A copy of the analytical results is presented in Attachment C to this memorandum.

#### 5.0 ANALYTICAL RESULTS

PCBs were detected above the laboratory method detection limit but below Part 201 Residential Cleanup Criteria in the soil samples collected from 0- to 2-foot interval in a majority of the borings, with the exception of the samples collected from the 0- to 2-foot interval in SB-2018 and SB-2027, where PCBs were not detected.

PCBs were detected in all of the samples collected from the 2- to 4-foot interval in the borings. PCBs detected in the samples collected from the 2- to 4-foot interval at SB-2017, SB-2022, SB-2023, and SB-2030 exceeded the Part 201 Residential Direct Contact Criterion (DCC) of 4 milligrams per kilogram (mg/kg), but were below the Part 201 Non-Residential DCC of 16 mg/kg.

PCBs were detected in all of the samples collected from the 4- to 6-foot interval in the borings. PCBs detected in the samples collected from the 4- to 6-foot interval at SB-2016, SB-2017, SB-2020, SB-2021, and SB-2028 exceeded the Part 201 Non-Residential DCC of 16 mg/kg. PCBs detected in the soil sample collected from SB-2029 exceeded the Part 201 Residential DCC of 4 mg/kg.

PCBs were detected above the Part 201 Non-Residential DCC of 16 mg/kg in the soil samples collected from the 6- to 8-foot interval at SB-2016, SB-2017, SB-2022, and SB-2028 and above the Part 201 Residential DCC of 4 mg/kg in the samples collected from the same interval at SB-2027 and SB-2030. PCBs were detected above laboratory method detection limits, but below Part 201 Residential DCC of 4 mg/kg in the sample collected from the 6 to 8-foot interval at SB-2020. No PCBs were detected in the samples collected from the 6- to 8-foot interval in the remaining borings.

PCBs were detected at or above the Part 201 Non-Residential DCC of 16 mg/kg in the samples collected from 8- to 10-foot interval at SB-2022 and SB-2028 and above the Part 201 Residential DCC of 4 mg/kg in the sample collected from the 8- to 10-foot interval in SB-2030. PCBs were detected above laboratory method detection limits, but below Part 201 Residential Cleanup Criteria in the samples collected from the 8- to 10-foot interval at SB-2016, SB-2017, SB-2020, SB-2022, and SB-2027. No PCBs were detected in the samples collected from the 8- to 10-foot interval in the remaining borings. It should be noted that some of

the soil samples collected from the 8- to 10-foot interval were saturated and are not directly comparable to soil criteria; however, identify whether or not PCBs are present within this interval.

Total PCBs detected in the soil samples consisted of one or more of the following Aroclors: Aroclor-1242, Aroclor-1248 and Aroclor-1254. Figures 3A through 3E illustrate the distribution and concentrations of total PCBs detected in soil for the 0- to 2-foot, 2- to 4-foot, 4- to 6-foot, 6- to 8-foot, and 8- to 10-foot intervals, respectively.

Field observations made during the soil boring installation activities were noted on the soil boring logs as identified in Section 2.1. The following observations were made pertaining to potential visual impacts observed in the soil borings:

- SB-2026 - Possible coal fragments at 2.5 feet bgs
- SB-2019 - Coal fragments, wood debris at 4.5 feet bgs
- SB-2024 - Coal fragments, slag, black cinders, and brick fragments between 4.8 and 6.0 feet bgs
- SB-2018 - Slag, black cinders, brick debris from 3.0 to 4.0 feet bgs
- SB-2025 - Slag, coal pieces, brick fragments, cinders from 3.5 to 5.0 feet bgs
- SB-2021 - Black at 7.5 feet bgs
- SB-2020 - Black at 4.8 feet and 7.5 feet bgs
- SB-2023 - Slag, brick, debris at 5.5 feet bgs, black clay at 6.0 feet bgs
- SB-2029 - Dark brown to black organics at 3.7 feet, cinders and slag from 7.5 to 7.7 feet bgs
- SB-2028 - Black with organics at 8.0 feet bgs
- SB-2016 - Possible coal at 2.5 feet bgs
- SB-2030 - Slag from 5.0 to 5.5 feet bgs

A review of the detected PCB concentrations in soil compared to the above field observations for potential impacts noted in the soil borings does not show a correlation (e.g., typically observations of impact had low PCB concentrations). However, a gray clay material was observed in a number of the soil borings, which often corresponded to elevated PCB concentrations.

## 6.0 CONCLUSIONS

PCBs are present in soil in the northeastern portion of the Site above Part 201 Residential and Non-Residential DCC.

During the RI, PCBs were detected above Part 201 Residential DCC in the soil sample collected from the 0- to 2-foot interval in MW-16. Based on laboratory analytical results for soil samples collected during this investigation, the greatest impacts were observed in soil borings located near the top of the bank of the Mill Race Drain, to the north and east of MW-16. In these locations, soil samples collected closer to the water table (i.e., 4 to 10 feet bgs) had higher concentrations of PCBs than the samples collected from shallower

depths (i.e., <4 feet bgs). No PCBs were detected above Part 201 Cleanup Criteria in any of the soil samples collected immediately adjacent to the former Mill Building.

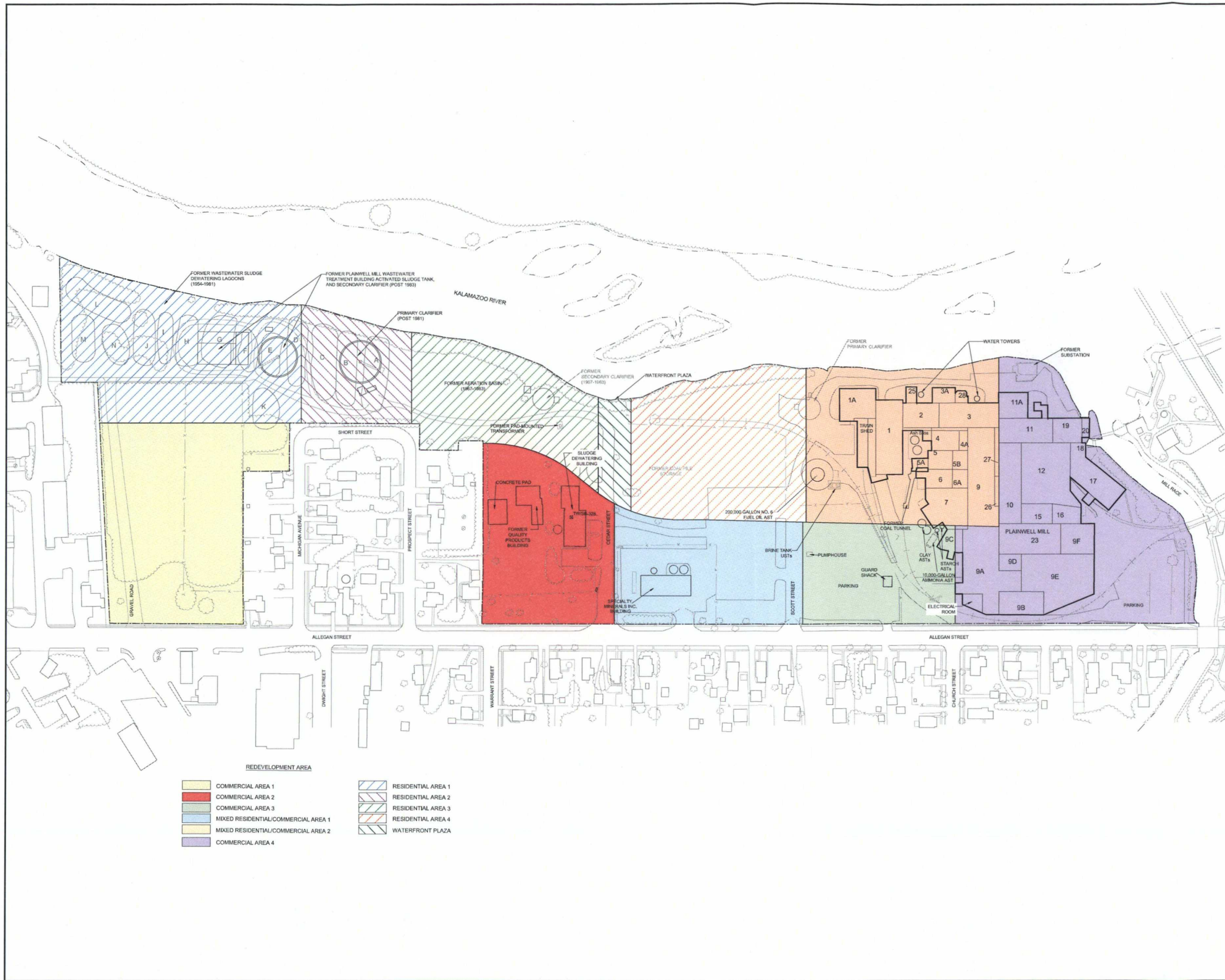
Based on the pattern of PCBs observed in the soil borings, one possibility is that the source of the elevated PCBs observed in the investigation area is the adjacent Mill Race. During preparation of the RI Report, CRA reviewed historical records and did not identify any Site-related pipes, tanks, electrical equipment or other operations in this area that could potentially be the source of the PCB impacts. Therefore, given that the highest concentrations of PCB-impacted material are located toward the Mill Race, which is known to contain PCB impacted sediments similar in nature to the PCBs observed in this area, the highest impacts are at depth (i.e., not consistent with a surface release), and there does not appear to be a source of PCBs in this vicinity of the Site related to historical Site operations, it is presumed that the source of the PCBs in this area is the Mill Race. Based on this premise, it is anticipated that PCB-impacted material is present to some degree between the row of soil borings located along the top of the riverbank toward the Mill Race. Given the logistical challenges with installing additional soil boring toward the Mill Race (i.e., steep slope and close proximity to the water), further investigation of this material is not proposed, but instead it is anticipated this area will be addressed through remedial activities.

It is also noted that PCB impacts may be present to the south of soil boring SB-2030; however, the impacts observed in this soil boring are below the Michigan Act 451, Part 201 soil criteria for Non-Residential use, which is the appropriate standard for this portion of the Site (i.e., commercial use). Therefore, unless the land use in this area changes, there is no need to further delineate the extent of PCB impacts further to the south.

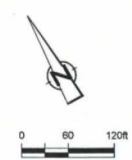
Elevated PCB concentrations were present in several locations at or near the water table. The SOW for this investigation did not include the collection and analysis of groundwater samples for PCBs; therefore, no determination can be made on whether or not groundwater in the vicinity of the investigation area is impacted by PCBs. Further evaluation of the potential for PCB impacted groundwater to be present in this area may be required at a future time, depending on the remedial approach for this area.

## FIGURES





NO	Revision	Date	Initial



- LEGEND
- PROPERTY BOUNDARY
  - FORMER FEATURE
  - TREE LINE
  - FENCE LINE
  - RAILROAD
  - SURFACE WATER

SCALE VERIFICATION  
THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved		
DRAWING STATUS		
Status	Date	Initial

FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN

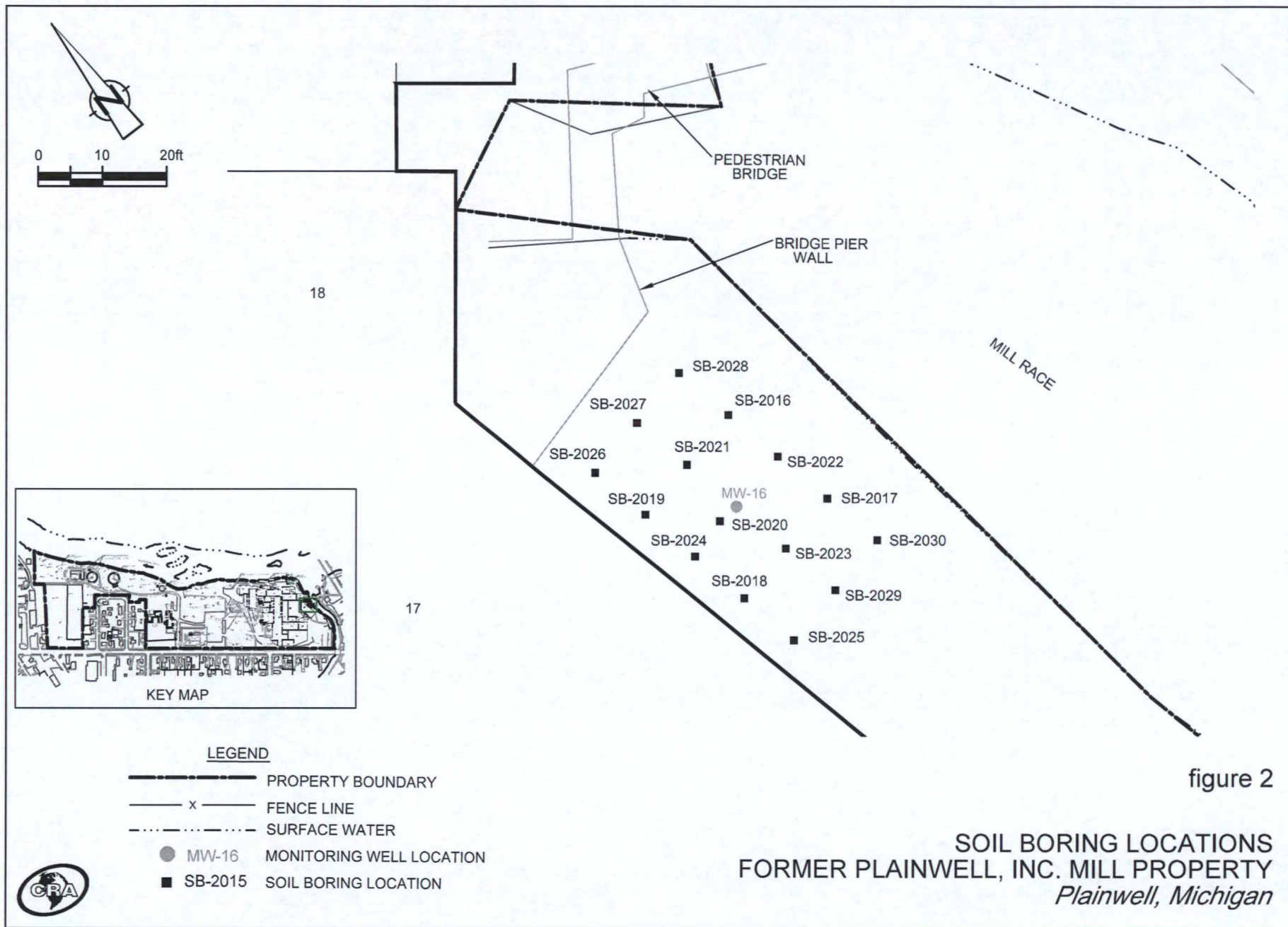
FORMER PLAINWELL, INC. MILL PROPERTY LAYOUT

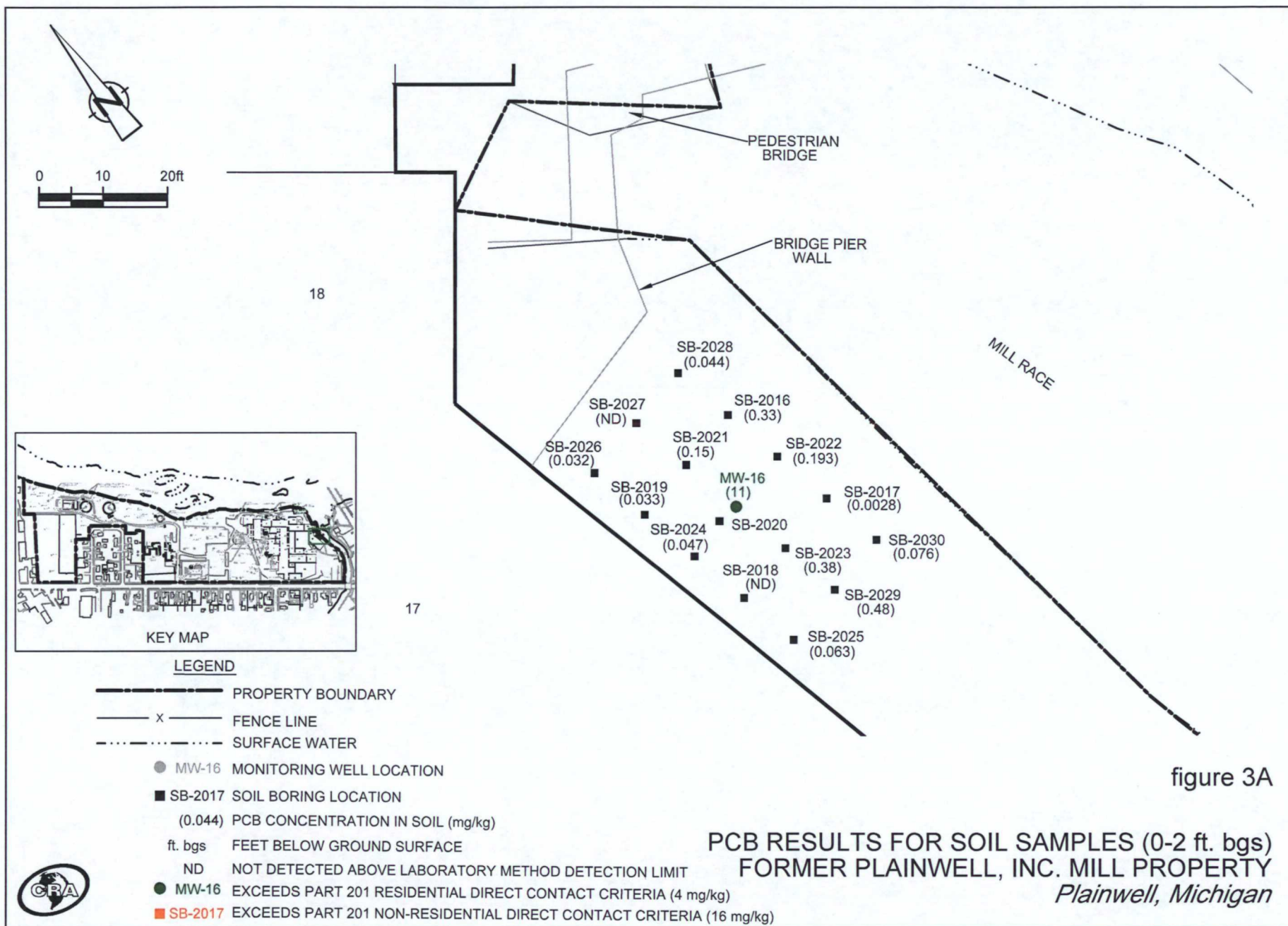
**CRA CONESTOGA-ROVERS & ASSOCIATES**

Source Reference:

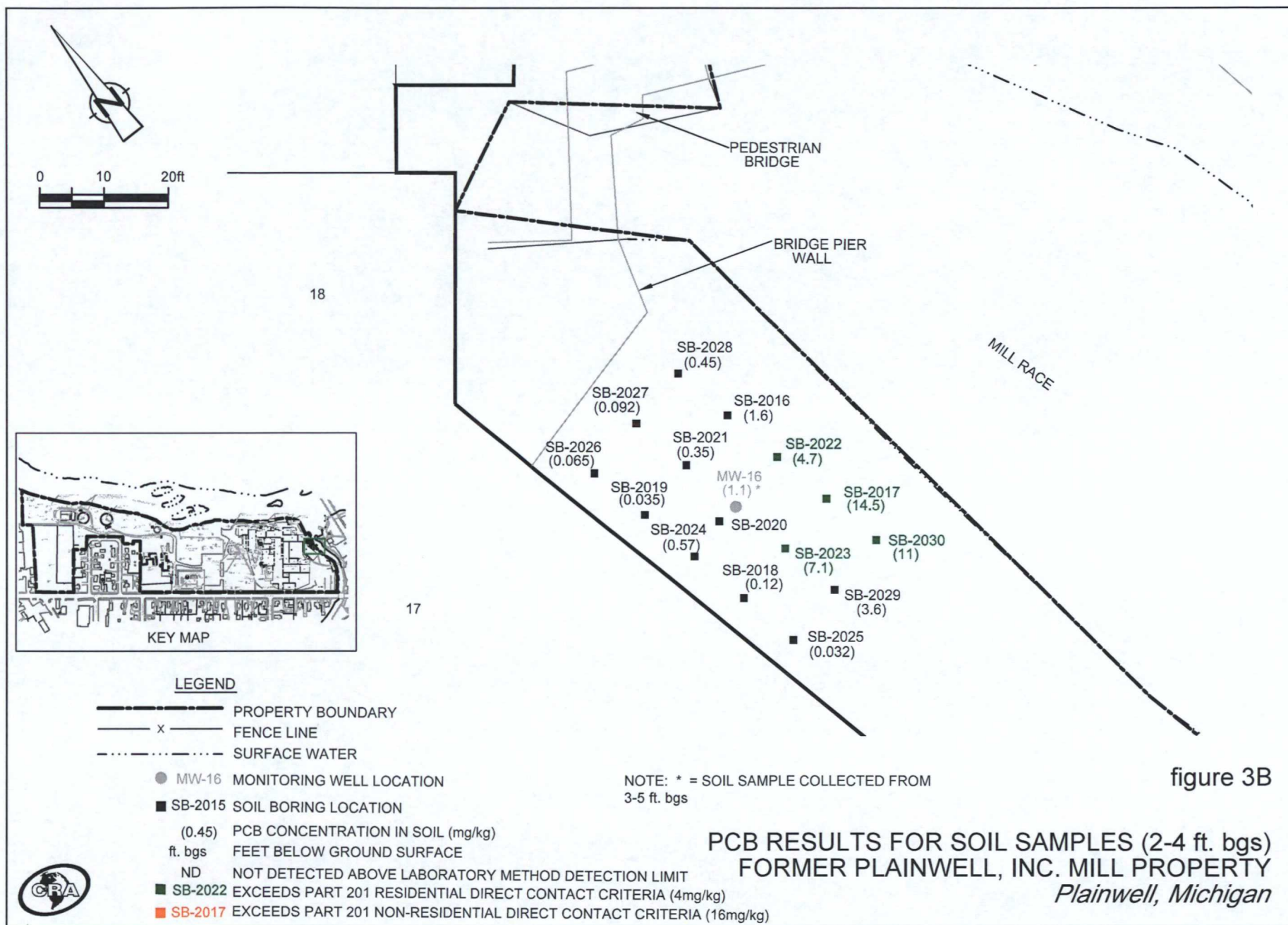
Project Manager: J.Q.	Reviewed By: L.C.	Date: OCTOBER 2012
Scale: 1:120	Project NR: 056394-05	Report NR: MEMO014 Drawing NR: figure 1

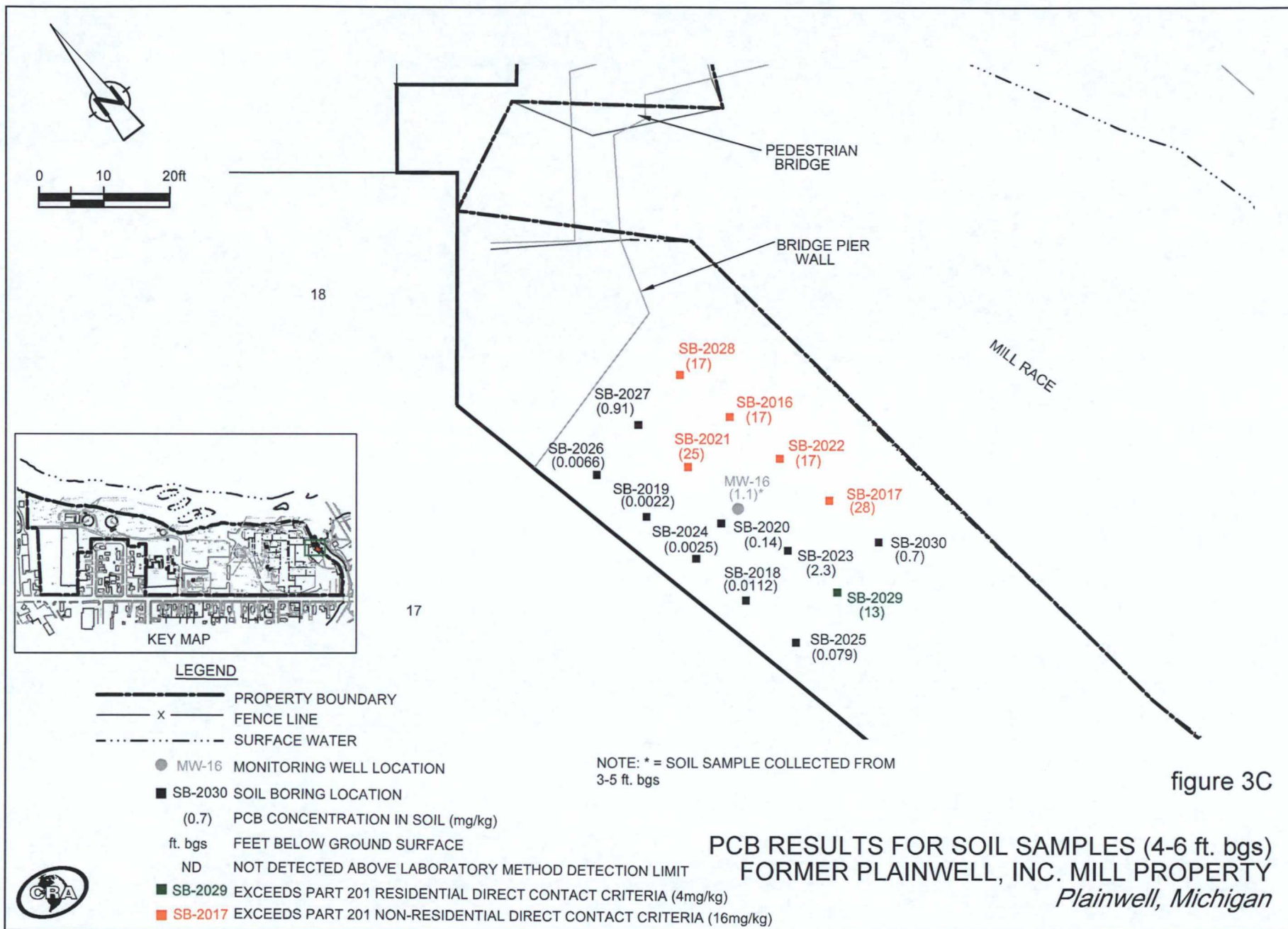




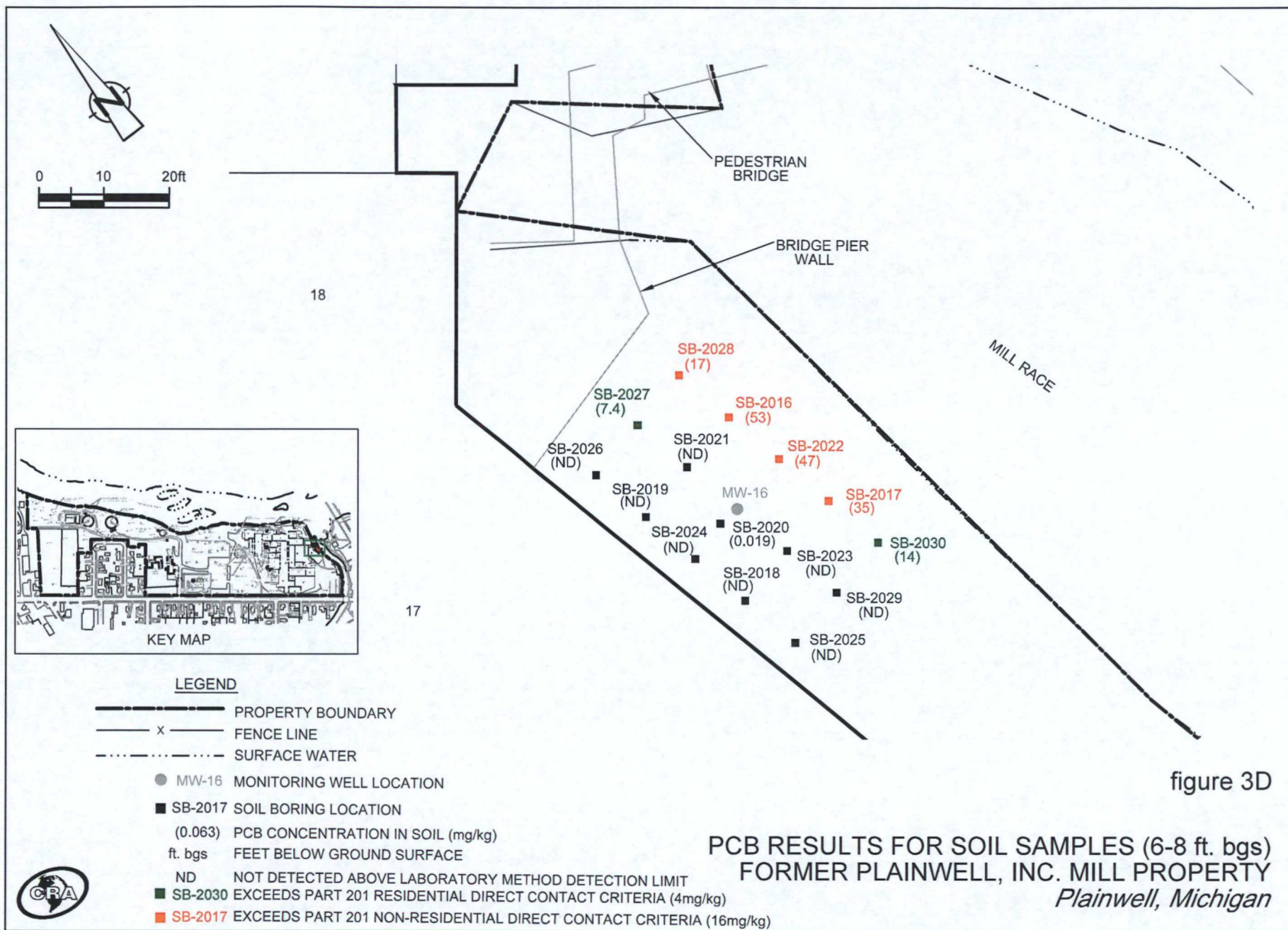


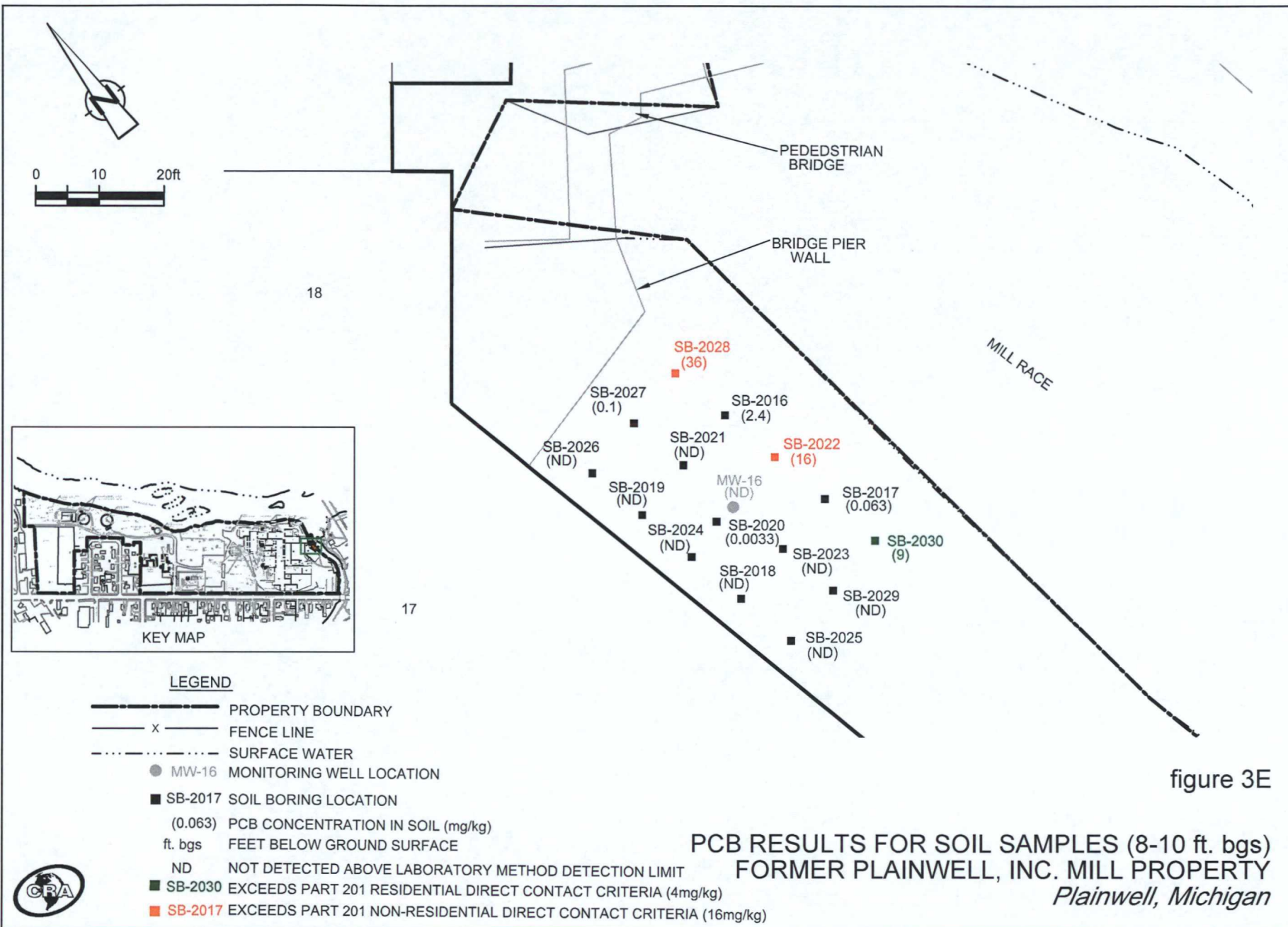














## TABLES

TABLE 1. Summary of the data used in the analysis.

TABLE 2. Summary of the data used in the analysis.

TABLE 3. Summary of the data used in the analysis.

TABLE 4. Summary of the data used in the analysis.

TABLE 5. Summary of the data used in the analysis.

TABLE 6. Summary of the data used in the analysis.

TABLE 7. Summary of the data used in the analysis.

TABLE 8. Summary of the data used in the analysis.

TABLE 9. Summary of the data used in the analysis.

TABLE 10. Summary of the data used in the analysis.

TABLE 11. Summary of the data used in the analysis.

TABLE 12. Summary of the data used in the analysis.

TABLE 13. Summary of the data used in the analysis.

TABLE 14. Summary of the data used in the analysis.

TABLE 15. Summary of the data used in the analysis.

TABLE 16. Summary of the data used in the analysis.

TABLE 17. Summary of the data used in the analysis.

TABLE 18. Summary of the data used in the analysis.

TABLE 19. Summary of the data used in the analysis.

TABLE 20. Summary of the data used in the analysis.

TABLE 21. Summary of the data used in the analysis.

TABLE 22. Summary of the data used in the analysis.

TABLE 23. Summary of the data used in the analysis.

TABLE 24. Summary of the data used in the analysis.

TABLE 25. Summary of the data used in the analysis.

TABLE 26. Summary of the data used in the analysis.

TABLE 27. Summary of the data used in the analysis.

TABLE 28. Summary of the data used in the analysis.

TABLE 29. Summary of the data used in the analysis.

TABLE 30. Summary of the data used in the analysis.

TABLE 1

**SAMPLE COLLECTION AND ANALYSIS SUMMARY  
ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES  
PCB-IMPACTED SOIL AT MW-16  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

<u>Sample Identification</u>	<u>Sample Location</u>	<u>Sample Depth</u>	<u>Matrix</u>	<u>QC Sample</u>	<u>Analysis</u>
SO-56394-032912-EB-001	SB-2020	4 - 6 ft bgs	Soil		PCBs
SO-56394-032912-EB-002	SB-2020	6 - 8 ft bgs	Soil		PCBs
SO-56394-032912-EB-003	SB-2020	8 - 10 ft bgs	Soil		PCBs
SO-56394-032912-EB-004	SB-2021	0 - 2 ft bgs	Soil		PCBs
SO-56394-032912-EB-004A	SB-2021	0 - 2 ft bgs	Soil	Duplicate (-004)	PCBs
SO-56394-032912-EB-005	SB-2021	2 - 4 ft bgs	Soil		PCBs
SO-56394-032912-EB-006	SB-2021	4 - 6 ft bgs	Soil		PCBs
SO-56394-032912-EB-007	SB-2021	6 - 8 ft bgs	Soil		PCBs
SO-56394-032912-EB-008	SB-2021	8 - 10 ft bgs	Soil		PCBs
SO-56394-032912-EB-009	SB-2016	0 - 2 ft bgs	Soil		PCBs
SO-56394-032912-EB-010	SB-2016	2 - 4 ft bgs	Soil		PCBs
SO-56394-032912-EB-011	SB-2016	4 - 6 ft bgs	Soil		PCBs
SO-56394-032912-EB-012	SB-2016	6 - 8 ft bgs	Soil		PCBs
SO-56394-032912-EB-013	SB-2016	8 - 10 ft bgs	Soil		PCBs
SO-56394-032912-EB-014	SB-2019	0 - 2 ft bgs	Soil		PCBs
SO-56394-032912-EB-015	SB-2019	2 - 4 ft bgs	Soil		PCBs
SO-56394-032912-EB-016	SB-2019	4 - 6 ft bgs	Soil	MS/MSD	PCBs
SO-56394-032912-EB-017	SB-2019	6 - 8 ft bgs	Soil		PCBs
SO-56394-032912-EB-018	SB-2019	8 - 10 ft bgs	Soil		PCBs
SO-56394-032912-EB-019	SB-2024	0 - 2 ft bgs	Soil		PCBs
SO-56394-032912-EB-019A	SB-2024	0 - 2 ft bgs	Soil	Duplicate (-019)	PCBs
SO-56394-032912-EB-020	SB-2024	2 - 4 ft bgs	Soil		PCBs
SO-56394-032912-EB-021	SB-2024	4 - 6 ft bgs	Soil		PCBs
SO-56394-032912-EB-022	SB-2024	6 - 8 ft bgs	Soil		PCBs
SO-56394-032912-EB-023	SB-2024	8 - 10 ft bgs	Soil		PCBs
SO-56394-032912-EB-024	SB-2018	0 - 2 ft bgs	Soil		PCBs
SO-56394-032912-EB-025	SB-2018	2 - 4 ft bgs	Soil		PCBs
SO-56394-032912-EB-026	SB-2018	4 - 6 ft bgs	Soil		PCBs
SO-56394-032912-EB-027	SB-2018	6 - 8 ft bgs	Soil		PCBs
SO-56394-032912-EB-028	SB-2018	8 - 10 ft bgs	Soil		PCBs
SO-56394-032912-EB-029	SB-2023	0 - 2 ft bgs	Soil		PCBs
SO-56394-032912-EB-029A	SB-2023	0 - 2 ft bgs	Soil	Duplicate (-029)	PCBs
SO-56394-032912-EB-030	SB-2023	2 - 4 ft bgs	Soil		PCBs
SO-56394-032912-EB-030A	SB-2023	2 - 4 ft bgs	Soil	Duplicate (-030)	PCBs
SO-56394-032912-EB-031	SB-2023	4 - 6 ft bgs	Soil		PCBs
SO-56394-032912-EB-032	SB-2023	6 - 8 ft bgs	Soil		PCBs
SO-56394-032912-EB-033	SB-2023	8 - 10 ft bgs	Soil		PCBs
SO-56394-032912-EB-034	SB-2017	0 - 2 ft bgs	Soil		PCBs
SO-56394-032912-EB-035	SB-2017	2 - 4 ft bgs	Soil		PCBs
SO-56394-032912-EB-036	SB-2017	4 - 6 ft bgs	Soil		PCBs
SO-56394-032912-EB-037	SB-2017	6 - 8 ft bgs	Soil		PCBs
SO-56394-032912-EB-037A	SB-2017	6 - 8 ft bgs	Soil	Duplicate (-037)	PCBs
SO-56394-032912-EB-038	SB-2017	8 - 10 ft bgs	Soil		PCBs
SO-56394-032912-EB-038A	SB-2017	8 - 10 ft bgs	Soil	Duplicate (-038)	PCBs
SO-56394-032912-EB-039	SB-2022	0 - 2 ft bgs	Soil	MS/MSD	PCBs
SO-56394-032912-EB-040	SB-2022	2 - 4 ft bgs	Soil		PCBs
SO-56394-032912-EB-041	SB-2022	4 - 6 ft bgs	Soil		PCBs
SO-56394-032912-EB-042	SB-2022	6 - 8 ft bgs	Soil		PCBs
SO-56394-032912-EB-043	SB-2022	8 - 10 ft bgs	Soil		PCBs
SO-56394-032912-EB-043A	SB-2022	8 - 10 ft bgs	Soil	Duplicate (-043)	PCBs
SO-56394-032912-EB-044	SB-2026	0 - 2 ft bgs	Soil	MS/MSD	PCBs
SO-56394-032912-EB-045	SB-2026	2 - 4 ft bgs	Soil		PCBs
SO-56394-032912-EB-045A	SB-2026	2 - 4 ft bgs	Soil	Duplicate (-045)	PCBs
SO-56394-032912-EB-046	SB-2026	4 - 6 ft bgs	Soil		PCBs
SO-56394-032912-EB-047	SB-2026	6 - 8 ft bgs	Soil		PCBs
SO-56394-032912-EB-048	SB-2026	8 - 10 ft bgs	Soil		PCBs
SO-56394-032912-EB-049	SB-2027	0 - 2 ft bgs	Soil		PCBs
SO-56394-032912-EB-050	SB-2027	2 - 4 ft bgs	Soil	MS/MSD	PCBs
SO-56394-032912-EB-051	SB-2027	4 - 6 ft bgs	Soil		PCBs
SO-56394-032912-EB-052	SB-2027	6 - 8 ft bgs	Soil		PCBs
SO-56394-032912-EB-052A	SB-2027	6 - 8 ft bgs	Soil	Duplicate (-052)	PCBs

**SAMPLE COLLECTION AND ANALYSIS SUMMARY  
ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES  
PCB-IMPACTED SOIL AT MW-16  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

<u>Sample Identification</u>	<u>Sample Location</u>	<u>Sample Depth</u>	<u>Matrix</u>	<u>QC Sample</u>	<u>Analysis</u>
SO-56394-032912-EB-001	SB-2020	4 - 6 ft bgs	Soil	Duplicate (-004)	PCBs
SO-56394-032912-EB-002	SB-2020	6 - 8 ft bgs	Soil		PCBs
SO-56394-032912-EB-003	SB-2020	8 - 10 ft bgs	Soil		PCBs
SO-56394-032912-EB-004	SB-2021	0 - 2 ft bgs	Soil		PCBs
SO-56394-032912-EB-004A	SB-2021	0 - 2 ft bgs	Soil		PCBs
SO-56394-032912-EB-005	SB-2021	2 - 4 ft bgs	Soil		PCBs
SO-56394-032912-EB-053	SB-2027	8 - 10 ft bgs	Soil		PCBs
SO-56394-032912-EB-054	SB-2028	0 - 2 ft bgs	Soil		PCBs
SO-56394-032912-EB-055	SB-2028	2 - 4 ft bgs	Soil		PCBs
SO-56394-032912-EB-056	SB-2028	4 - 6 ft bgs	Soil		PCBs
SO-56394-032912-EB-057	SB-2028	6 - 8 ft bgs	Soil		PCBs
SO-56394-032912-EB-058	SB-2028	8 - 10 ft bgs	Soil		PCBs
SO-56394-032912-EB-059	SB-2025	0 - 2 ft bgs	Soil		PCBs
SO-56394-032912-EB-060	SB-2025	2 - 4 ft bgs	Soil		PCBs
SO-56394-032912-EB-061	SB-2025	4 - 6 ft bgs	Soil		PCBs
SO-56394-032912-EB-062	SB-2025	6 - 8 ft bgs	Soil		PCBs
SO-56394-032912-EB-063	SB-2025	8 - 10 ft bgs	Soil		PCBs
SO-56394-032912-EB-064	SB-2029	0 - 2 ft bgs	Soil		PCBs
SO-56394-032912-EB-065	SB-2029	2 - 4 ft bgs	Soil		PCBs
SO-56394-032912-EB-066	SB-2029	4 - 6 ft bgs	Soil		PCBs
SO-56394-032912-EB-067	SB-2029	6 - 8 ft bgs	Soil		PCBs
SO-56394-032912-EB-068	SB-2029	8 - 10 ft bgs	Soil		PCBs
SO-56394-032912-EB-069	SB-2030	0 - 2 ft bgs	Soil		PCBs
SO-56394-032912-EB-070	SB-2030	2 - 4 ft bgs	Soil		PCBs
SO-56394-032912-EB-071	SB-2030	4 - 6 ft bgs	Soil		PCBs
SO-56394-032912-EB-072	SB-2030	6 - 8 ft bgs	Soil		PCBs
SO-56394-032912-EB-073	SB-2030	8 - 10 ft bgs	Soil		PCBs

*Notes:*

PCBs - Polychlorinated Biphenyls

QC - Quality Control

ft bgs - feet below ground surface

MS/MSD - Matrix Spike / Matrix Spike Duplicate

TABLE 2

SUMMARY OF ANALYTICAL RESULTS  
 ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES  
 PCB-IMPACTED SOIL AT MW-16  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria <sup>(1)</sup>

<i>Residential Drinking Water Protection</i>	<i>Non-Residential Drinking Water Protection</i>	<i>Groundwater Surface Water Interface Protection</i>	<i>Groundwater Contact Protection</i>	<i>Residential Soil Volatilization to Indoor Air Inhalation</i>	<i>Non-Residential Soil Volatilization to Indoor Air Inhalation</i>	<i>Residential Infinite Source Volatile Soil</i>	<i>Non-Residential Infinite Source Volatile Soil</i>
<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i</i>

*Units*

***Polychlorinated Biphenyls (PCBs)***

Aroclor-1016 (PCB-1016)	mg/kg	NC	NC	NC	NC	NC	NC	NC	NC
Aroclor-1221 (PCB-1221)	mg/kg	NC	NC	NC	NC	NC	NC	NC	NC
Aroclor-1232 (PCB-1232)	mg/kg	NC	NC	NC	NC	NC	NC	NC	NC
Aroclor-1242 (PCB-1242)	mg/kg	NC	NC	NC	NC	NC	NC	NC	NC
Aroclor-1248 (PCB-1248)	mg/kg	NC	NC	NC	NC	NC	NC	NC	NC
Aroclor-1254 (PCB-1254)	mg/kg	NC	NC	NC	NC	NC	NC	NC	NC
Aroclor-1260 (PCB-1260)	mg/kg	NC	NC	NC	NC	NC	NC	NC	NC
Total PCBs	mg/kg	NLL	NLL	NLL	NLL	3000	16000	240	810

Notes:

<sup>(1)</sup> Cleanup criteria identified by MDEQ RRD Op

Memo No. 1, updated 3/25/2011, pursuant to

1994 PA 451 as amended

ft BGS - feet below ground surface

U - Not present at or above the associated value

J - Estimated concentration

UJ - Estimated reporting limit

NLL - Not likely to leach

NC - No criteria

TABLE 2

SUMMARY OF ANALYTICAL RESULTS  
 ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES  
 PCB-IMPACTED SOIL AT MW-16  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Residential and Non-Residential Generic Cleanup Criteria<sup>(1)</sup>

		<i>Residential Finite VSIC for 5 Meter Source j</i>	<i>Non-Residential Finite VSIC for 5 Meter Source k</i>	<i>Residential Finite VSIC for 2 Meter Source l</i>	<i>Non-Residential Finite VSIC for 2 Meter Source m</i>	<i>Residential Particulate Soil Inhalation n</i>	<i>Non-Residential Particulate Soil Inhalation o</i>	<i>Residential Direct Contact p</i>	<i>Non-Residential Direct Contact q</i>
<i>Units</i>									
<b>Polychlorinated Biphenyls (PCBs)</b>									
Aroclor-1016 (PCB-1016)	mg/kg	NC	NC	NC	NC	NC	NC	NC	NC
Aroclor-1221 (PCB-1221)	mg/kg	NC	NC	NC	NC	NC	NC	NC	NC
Aroclor-1232 (PCB-1232)	mg/kg	NC	NC	NC	NC	NC	NC	NC	NC
Aroclor-1242 (PCB-1242)	mg/kg	NC	NC	NC	NC	NC	NC	NC	NC
Aroclor-1248 (PCB-1248)	mg/kg	NC	NC	NC	NC	NC	NC	NC	NC
Aroclor-1254 (PCB-1254)	mg/kg	NC	NC	NC	NC	NC	NC	NC	NC
Aroclor-1260 (PCB-1260)	mg/kg	NC	NC	NC	NC	NC	NC	NC	NC
Total PCBs	mg/kg	7900	28000	7900	28000	5200	6500	4	16

Notes:

<sup>(1)</sup> Cleanup criteria identified by MDEQ RRD Op

Memo No. 1, updated 3/25/2011, pursuant to

1994 PA 451 as amended

ft BGS - feet below ground surface

U - Not present at or above the associated value

J - Estimated concentration

UJ - Estimated reporting limit

NLL - Not likely to leach

NC - No criteria

TABLE 2

SUMMARY OF ANALYTICAL RESULTS  
 ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES  
 PCB-IMPACTED SOIL AT MW-16  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

Sample Location	SB-2016	SB-2016	SB-2016	SB-2016	SB-2016	SB-2017	SB-2017	SB-2017	SB-2017	SB-2017	
Sample Identification (SO-56394-)	032912-EB-009	032912-EB-010	032912-EB-011	032912-EB-012	032912-EB-013	032912-EB-034	032912-EB-035	032912-EB-036	032912-EB-037	032912-EB-037A	
Sample Date	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	
Sample Depth	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(6-8) ft BGS	(8-10) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(6-8) ft BGS	(6-8) ft BGS	
Sample Type	Units									Duplicate	
Polychlorinated Biphenyls (PCBs)											
Aroclor-1016 (PCB-1016)	mg/kg	0.0075 U	0.072 U	0.93 U	1.1 U	0.078 U	0.0067 U	0.79 U	1.1 U	1.1 U	2 U
Aroclor-1221 (PCB-1221)	mg/kg	0.015 U	0.15 U	1.9 U	2.2 U	0.16 U	0.014 U	1.6 U	2.2 U	2.1 U	4 U
Aroclor-1232 (PCB-1232)	mg/kg	0.0075 U	0.072 U	0.93 U	1.1 U	0.078 U	0.0067 U	0.79 U	1.1 U	1.1 U	2 U
Aroclor-1242 (PCB-1242)	mg/kg	0.0075 U	0.072 U	0.93 U	53	2.4	0.0067 U	0.79 U	1.1 U	35	29
Aroclor-1248 (PCB-1248)	mg/kg	0.33	1.6	17	1.1 U	0.078 U	0.0067 U	8.3	28	1.1 U	2 U
Aroclor-1254 (PCB-1254)	mg/kg	0.0075 U	0.072 U	0.93 U	1.1 U	0.078 U	0.0028 J	6.2	1.1 U	1.1 U	2 U
Aroclor-1260 (PCB-1260)	mg/kg	0.0075 U	0.072 U	0.93 U	1.1 U	0.078 U	0.0067 U	0.79 U	1.1 U	1.1 U	2 U
Total PCBs	mg/kg	0.33	1.6	17 <sup>Pq</sup>	53 <sup>Pq</sup>	2.4	0.0028 J	14.5 <sup>P</sup>	28 <sup>Pq</sup>	35 <sup>Pq</sup>	29 <sup>Pq</sup>



TABLE 2

SUMMARY OF ANALYTICAL RESULTS  
 ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES  
 PCB-IMPACTED SOIL AT MW-16  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

Sample Location	SB-2017	SB-2017	SB-2018	SB-2018	SB-2018	SB-2018	SB-2018	SB-2018	SB-2019	SB-2019	SB-2019
Sample Identification (SO-56394-)	032912-EB-038	032912-EB-038A	032912-EB-024	032912-EB-025	032912-EB-026	032912-EB-027	032912-EB-028	032912-EB-014	032912-EB-015	032912-EB-016	
Sample Date	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	
Sample Depth	(8-10) ft BGS	(8-10) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(6-8) ft BGS	(8-10) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	
Sample Type		Duplicate									
Units											
Polychlorinated Biphenyls (PCBs)											
Aroclor-1016 (PCB-1016)	mg/kg	0.066 U	0.0084 U	0.0065 U	0.0071 U	0.0072 U	0.0055 U	0.0054 U	0.0071 U	0.0072 U	0.0072 U
Aroclor-1221 (PCB-1221)	mg/kg	0.14 U	0.017 U	0.013 U	0.015 U	0.015 U	0.011 U	0.011 U	0.015 U	0.015 U	0.015 U
Aroclor-1232 (PCB-1232)	mg/kg	0.066 U	0.0084 U	0.0065 U	0.0071 U	0.0072 U	0.0055 U	0.0054 U	0.0071 U	0.0072 U	0.0072 U
Aroclor-1242 (PCB-1242)	mg/kg	0.027 J	0.063 J	0.0065 U	0.0071 U	0.0072 U	0.0055 U	0.0054 U	0.0071 U	0.0072 U	0.0072 U
Aroclor-1248 (PCB-1248)	mg/kg	0.066 U	0.0084 U	0.0065 U	0.0071 U	0.0072 U	0.0055 U	0.0054 U	0.0071 U	0.0072 U	0.0072 U
Aroclor-1254 (PCB-1254)	mg/kg	0.024 J	0.0084 U	0.0065 U	0.12	0.0058 J	0.0055 U	0.0054 U	0.033	0.035	0.0022 J
Aroclor-1260 (PCB-1260)	mg/kg	0.066 U	0.0084 U	0.0065 U	0.0071 U	0.0054 J	0.0055 U	0.0054 U	0.0071 U	0.0072 U	0.0072 U
Total PCBs	mg/kg	0.051 J	0.063 J	ND	0.12	0.0112 J	ND	ND	0.033	0.035	0.0022 J

TABLE 2

SUMMARY OF ANALYTICAL RESULTS  
 ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES  
 PCB-IMPACTED SOIL AT MW-16  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

Sample Location	SB-2019	SB-2019	SB-2020	SB-2020	SB-2020	SB-2021	SB-2021	SB-2021	SB-2021	SB-2021	
Sample Identification (SO-56394-)	032912-EB-017	032912-EB-018	032912-EB-001	032912-EB-002	032912-EB-003	032912-EB-004	032912-EB-004A	032912-EB-005	032912-EB-006	032912-EB-007	
Sample Date	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	
Sample Depth	(6-8) ft BGS	(8-10) ft BGS	(4-6) ft BGS	(6-8) ft BGS	(8-10) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(6-8) ft BGS	
Sample Type							Duplicate				
Units											
Polychlorinated Biphenyls (PCBs)											
Aroclor-1016 (PCB-1016)	mg/kg	0.0058 U	0.0058 U	0.011 U	0.014 U	0.0087 U	0.0069 U	0.0054 U	0.0073 U	0.85 U	0.092 U
Aroclor-1221 (PCB-1221)	mg/kg	0.012 U	0.012 U	0.022 U	0.027 U	0.018 U	0.014 U	0.011 U	0.015 U	1.7 U	0.19 U
Aroclor-1232 (PCB-1232)	mg/kg	0.0058 U	0.0058 U	0.011 U	0.014 U	0.0087 U	0.0069 U	0.0054 U	0.0073 U	0.85 U	0.092 U
Aroclor-1242 (PCB-1242)	mg/kg	0.0058 U	0.0058 U	0.011 U	0.014 U	0.0087 U	0.0069 U	0.0054 U	0.0073 U	0.85 U	0.092 U
Aroclor-1248 (PCB-1248)	mg/kg	0.0058 U	0.0058 U	0.14	0.019	0.0033 J	0.11	0.078	0.35	25	0.092 U
Aroclor-1254 (PCB-1254)	mg/kg	0.0058 U	0.0058 U	0.011 U	0.014 U	0.0087 U	0.0069 UJ	0.072 J	0.0073 U	0.85 U	0.092 U
Aroclor-1260 (PCB-1260)	mg/kg	0.0058 U	0.0058 U	0.011 U	0.014 U	0.0087 U	0.0069 U	0.0054 U	0.0073 U	0.85 U	0.092 U
Total PCBs	mg/kg	ND	ND	0.14	0.019	0.0033 J	0.11 J	0.15 J	0.35	25 <sup>PA</sup>	ND

TABLE 2

SUMMARY OF ANALYTICAL RESULTS  
 ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES  
 PCB-IMPACTED SOIL AT MW-16  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

Sample Location	SB-2021	SB-2022	SB-2022	SB-2022	SB-2022	SB-2022	SB-2022	SB-2022	SB-2023	SB-2023	SB-2023
Sample Identification (SO-56394-)	032912-EB-008	032912-EB-039	032912-EB-040	032912-EB-041	032912-EB-042	032912-EB-043	032912-EB-043A	032912-EB-029	032912-EB-029A	032912-EB-030	
Sample Date	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	
Sample Depth	(8-10) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(6-8) ft BGS	(8-10) ft BGS	(8-10) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(2-4) ft BGS	
Sample Type							Duplicate		Duplicate		
Units											
Polychlorinated Biphenyls (PCBs)											
Aroclor-1016 (PCB-1016)	mg/kg	0.1 U	0.0068 U	0.79 U	1.1 U	1.1 U	0.92 U	0.098 U	0.0072 U	0.014 U	0.78 U
Aroclor-1221 (PCB-1221)	mg/kg	0.2 U	0.014 U	1.6 U	2.1 U	2.1 U	1.9 U	0.2 U	0.015 U	0.028 U	1.6 U
Aroclor-1232 (PCB-1232)	mg/kg	0.1 U	0.0068 U	0.79 U	1.1 U	1.1 U	0.92 U	0.098 U	0.0072 U	0.014 U	0.78 U
Aroclor-1242 (PCB-1242)	mg/kg	0.1 U	0.0068 U	0.79 U	1.1 U	47	16 J	3.3 J	0.0072 U	0.014 U	0.78 U
Aroclor-1248 (PCB-1248)	mg/kg	0.1 U	0.11	4.7	17	1.1 U	0.92 U	0.098 U	0.27	0.38 J	7.1
Aroclor-1254 (PCB-1254)	mg/kg	0.1 U	0.083	0.79 U	1.1 U	1.1 U	0.92 U	0.098 U	0.0072 U	0.014 U	0.78 U
Aroclor-1260 (PCB-1260)	mg/kg	0.1 U	0.0068 U	0.79 U	1.1 U	1.1 U	0.92 U	0.098 U	0.0072 U	0.014 U	0.78 U
Total PCBs	mg/kg	ND	0.193	4.7 <sup>P</sup>	17 <sup>Pq</sup>	47 <sup>Pq</sup>	16 J <sup>P</sup>	3.3 J	0.27	0.38 J	7.1 <sup>P</sup>

TABLE 2

SUMMARY OF ANALYTICAL RESULTS  
 ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES  
 PCB-IMPACTED SOIL AT MW-16  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

Sample Location		SB-2023	SB-2023	SB-2023	SB-2023	SB-2024	SB-2024	SB-2024	SB-2024	SB-2024	SB-2024
Sample Identification (SO-56394-)		032912-EB-030A	032912-EB-031	032912-EB-032	032912-EB-033	032912-EB-019	032912-EB-019A	032912-EB-020	032912-EB-021	032912-EB-022	032912-EB-023
Sample Date		3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012
Sample Depth		(2-4) ft BGS	(4-6) ft BGS	(6-8) ft BGS	(8-10) ft BGS	(0-2) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(6-8) ft BGS	(8-10) ft BGS
Sample Type		Duplicate									
	Units										
<b>Polychlorinated Biphenyls (PCBs)</b>											
Aroclor-1016 (PCB-1016)	mg/kg	0.059 U	0.11 U	0.093 U	0.093 U	0.0072 U	0.0055 U	0.0069 U	0.0094 U	0.0091 U	0.0059 U
Aroclor-1221 (PCB-1221)	mg/kg	0.12 U	0.21 U	0.19 U	0.19 U	0.015 U	0.011 U	0.014 U	0.019 U	0.019 U	0.012 U
Aroclor-1232 (PCB-1232)	mg/kg	0.059 U	0.11 U	0.093 U	0.093 U	0.0072 U	0.0055 U	0.0069 U	0.0094 U	0.0091 U	0.0059 U
Aroclor-1242 (PCB-1242)	mg/kg	0.059 U	0.11 U	0.093 U	0.093 U	0.0072 U	0.0055 U	0.0069 U	0.0094 U	0.0091 U	0.0059 U
Aroclor-1248 (PCB-1248)	mg/kg	2.7	2.3	0.093 U	0.093 U	0.0072 UJ	0.024 J	0.33	0.0094 U	0.0091 U	0.0059 U
Aroclor-1254 (PCB-1254)	mg/kg	0.059 U	0.11 U	0.093 U	0.093 U	0.034	0.023	0.24	0.0025 J	0.0091 U	0.0059 U
Aroclor-1260 (PCB-1260)	mg/kg	0.059 U	0.11 U	0.093 U	0.093 U	0.0072 U	0.0055 U	0.0069 U	0.0094 U	0.0091 U	0.0059 U
Total PCBs	mg/kg	2.7	2.3	ND	ND	0.034 J	0.047 J	0.57	0.0025 J	ND	ND

TABLE 2

SUMMARY OF ANALYTICAL RESULTS  
 ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES  
 PCB-IMPACTED SOIL AT MW-16  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

Sample Location	SB-2025	SB-2025	SB-2025	SB-2025	SB-2025	SB-2026	SB-2026	SB-2026	SB-2026	SB-2026
Sample Identification (SO-56394-)	032912-EB-059	032912-EB-060	032912-EB-061	032912-EB-062	032912-EB-063	032912-EB-044	032912-EB-045	032912-EB-045A	032912-EB-046	032912-EB-047
Sample Date	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012
Sample Depth	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(6-8) ft BGS	(8-10) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(6-8) ft BGS
Sample Type								Duplicate		
Units										
<b>Polychlorinated Biphenyls (PCBs)</b>										
Aroclor-1016 (PCB-1016)	mg/kg	0.0055 U	0.0057 U	0.0065 U	0.0054 U	0.0054 U	0.0055 U	0.0056 U	0.014	0.0062 U
Aroclor-1221 (PCB-1221)	mg/kg	0.011 U	0.012 U	0.013 U	0.011 U	0.011 U	0.011 U	0.012 U	0.012	0.013 U
Aroclor-1232 (PCB-1232)	mg/kg	0.0055 U	0.0057 U	0.0065 U	0.0054 U	0.0054 U	0.0055 U	0.0056 U	0.032	0.0062 U
Aroclor-1242 (PCB-1242)	mg/kg	0.0055 U	0.0057 U	0.0065 U	0.0054 U	0.0054 U	0.0063	0.0056 U	0.024	0.0062 U
Aroclor-1248 (PCB-1248)	mg/kg	0.0055 U	0.0057 U	0.0065 U	0.0054 U	0.0054 U	0.0055 U	0.0056 U	0.053	0.0062 U
Aroclor-1254 (PCB-1254)	mg/kg	0.063	0.032	0.079	0.0054 U	0.0054 U	0.032	0.058	0.065	0.0066
Aroclor-1260 (PCB-1260)	mg/kg	0.0055 U	0.0057 U	0.0065 U	0.0054 U	0.0054 U	0.0055 U	0.0056 U	0.0056 U	0.0062 U
Total PCBs	mg/kg	0.063	0.032	0.079	ND	ND	0.032	0.058	0.065	0.0066

TABLE 2

SUMMARY OF ANALYTICAL RESULTS  
 ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES  
 PCB-IMPACTED SOIL AT MW-16  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

Sample Location		SB-2026	SB-2027	SB-2027	SB-2027	SB-2027	SB-2027	SB-2027	SB-2027	SB-2028	SB-2028	SB-2028
Sample Identification (SO-56394-)		032912-EB-048	032912-EB-049	032912-EB-050	032912-EB-051	032912-EB-052	032912-EB-052A	032912-EB-053	032912-EB-054	032912-EB-055	032912-EB-056	
Sample Date		3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	
Sample Depth		(8-10) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(6-8) ft BGS	(6-8) ft BGS	(8-10) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	
Sample Type							Duplicate					
	Units											
Polychlorinated Biphenyls (PCBs)												
Aroclor-1016 (PCB-1016)	mg/kg	0.0057 U	0.018	0.0052 U	0.028 U	0.42 U	0.14 U	0.0058 U	0.0053 U	0.027 U	1.3 U	
Aroclor-1221 (PCB-1221)	mg/kg	0.012 U	0.012	0.011 U	0.055 U	0.84 U	0.28 U	0.012 U	0.011 U	0.054 U	2.5 U	
Aroclor-1232 (PCB-1232)	mg/kg	0.0057 U	0.024	0.0052 U	0.028 U	0.42 U	0.14 U	0.0058 U	0.0053 U	0.027 U	1.3 U	
Aroclor-1242 (PCB-1242)	mg/kg	0.0057 U	0.023	0.0052 U	0.028 U	0.42 U	0.14 U	0.0058 U	0.0053 U	0.027 U	17	
Aroclor-1248 (PCB-1248)	mg/kg	0.0057 U	0.021	0.092 J	0.91	7.4	3.4	0.1	0.0053 U	0.45	1.3 U	
Aroclor-1254 (PCB-1254)	mg/kg	0.0057 U	0.026	0.0052 U	0.028 U	0.42 U	0.14 U	0.0058 U	0.044	0.027 U	1.3 U	
Aroclor-1260 (PCB-1260)	mg/kg	0.0057 U	0.026	0.0052 U	0.028 U	0.42 U	0.14 U	0.0058 U	0.0053 U	0.027 U	1.3 U	
Total PCBs	mg/kg	ND	ND	0.092 J	0.91	7.4 <sup>P</sup>	3.4	0.1	0.044	0.45	17 <sup>Pq</sup>	



TABLE 2

SUMMARY OF ANALYTICAL RESULTS  
 ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES  
 PCB-IMPACTED SOIL AT MW-16  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

Sample Location	SB-2028	SB-2028	SB-2029	SB-2029	SB-2029	SB-2029	SB-2029	SB-2029	SB-2030	SB-2030	SB-2030
Sample Identification (SO-56394-)	032912-EB-057	032912-EB-058	032912-EB-064	032912-EB-065	032912-EB-066	032912-EB-067	032912-EB-068	032912-EB-069	032912-EB-070	032912-EB-071	032912-EB-071
Sample Date	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012	3/29/2012
Sample Depth	(6-8) ft BGS	(8-10) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(6-8) ft BGS	(8-10) ft BGS	(0-2) ft BGS	(2-4) ft BGS	(4-6) ft BGS	(4-6) ft BGS
Sample Type											
<i>Units</i>											
<i>Polychlorinated Biphenyls (PCBs)</i>											
Aroclor-1016 (PCB-1016)	mg/kg	0.48 U	2 U	0.028 U	0.14 U	0.44 U	0.0092 U	0.084 U	0.011	0.33 U	0.071 U
Aroclor-1221 (PCB-1221)	mg/kg	0.96 U	3.9 U	0.055 U	0.27 U	0.87 U	0.019 U	0.17 U	0.012	0.65 U	0.15 U
Aroclor-1232 (PCB-1232)	mg/kg	0.48 U	2 U	0.028 U	0.14 U	0.44 U	0.0092 U	0.084 U	0.02	0.33 U	0.071 U
Aroclor-1242 (PCB-1242)	mg/kg	17	36	0.028 U	0.14 U	0.44 U	0.0092 U	0.084 U	0.014	0.33 U	0.071 U
Aroclor-1248 (PCB-1248)	mg/kg	0.48 U	2 U	0.48	3.6	13	0.0092 U	0.084 U	0.054	11	0.7
Aroclor-1254 (PCB-1254)	mg/kg	0.48 U	2 U	0.028 U	0.14 U	0.44 U	0.0092 U	0.084 U	0.076	0.33 U	0.071 U
Aroclor-1260 (PCB-1260)	mg/kg	0.48 U	2 U	0.028 U	0.14 U	0.44 U	0.0092 U	0.084 U	0.0056 U	0.33 U	0.071 U
Total PCBs	mg/kg	17 <sup>PQ</sup>	36 <sup>PQ</sup>	0.48	3.6	13 <sup>P</sup>	ND	ND	0.076	11 <sup>P</sup>	0.7

TABLE 2

SUMMARY OF ANALYTICAL RESULTS  
 ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES  
 PCB-IMPACTED SOIL AT MW-16  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

Sample Location	SB-2030	SB-2030	MW-16	MW-16	MW-16
Sample Identification (SO-56394-)	032912-EB-072	032912-EB-073	011210-CB-015	011210-CB-016	011210-CB-017
Sample Date	3/29/2012	3/29/2012	1/12/2010	1/12/2010	1/12/2010
Sample Depth	(6-8) ft BGS	(8-10) ft BGS	(8-10) ft BGS	(3-5) ft BGS	(0-2) ft BGS
Sample Type					

## Units

## Polychlorinated Biphenyls (PCBs)

Aroclor-1016 (PCB-1016)	mg/kg	0.49 U	0.35 U	0.012 U	0.07 U	0.79 UJ
Aroclor-1221 (PCB-1221)	mg/kg	0.98 U	0.69 U	0.012 U	0.07 U	0.79 UJ
Aroclor-1232 (PCB-1232)	mg/kg	0.49 U	0.35 U	0.012 U	0.07 U	0.79 UJ
Aroclor-1242 (PCB-1242)	mg/kg	14	0.35 U	0.012 U	0.07 U	0.79 UJ
Aroclor-1248 (PCB-1248)	mg/kg	0.49 U	9	0.012 U	0.78	8.1 J
Aroclor-1254 (PCB-1254)	mg/kg	0.49 U	0.35 U	0.012 U	0.24 J	2.9 J
Aroclor-1260 (PCB-1260)	mg/kg	0.49 U	0.35 U	0.012 U	0.089 J	0.79 UJ
Total PCBs	mg/kg	14 <sup>P</sup>	9 <sup>P</sup>	ND	1.109 J	11 J <sup>P</sup>

1. [REDACTED] 2. [REDACTED] 3. [REDACTED] 4. [REDACTED] 5. [REDACTED] 6. [REDACTED] 7. [REDACTED] 8. [REDACTED] 9. [REDACTED] 10. [REDACTED] 11. [REDACTED] 12. [REDACTED] 13. [REDACTED] 14. [REDACTED] 15. [REDACTED] 16. [REDACTED] 17. [REDACTED] 18. [REDACTED] 19. [REDACTED] 20. [REDACTED] 21. [REDACTED] 22. [REDACTED] 23. [REDACTED] 24. [REDACTED] 25. [REDACTED] 26. [REDACTED] 27. [REDACTED] 28. [REDACTED] 29. [REDACTED] 30. [REDACTED] 31. [REDACTED] 32. [REDACTED] 33. [REDACTED] 34. [REDACTED] 35. [REDACTED] 36. [REDACTED] 37. [REDACTED] 38. [REDACTED] 39. [REDACTED] 40. [REDACTED] 41. [REDACTED] 42. [REDACTED] 43. [REDACTED] 44. [REDACTED] 45. [REDACTED] 46. [REDACTED] 47. [REDACTED] 48. [REDACTED] 49. [REDACTED] 50. [REDACTED] 51. [REDACTED] 52. [REDACTED] 53. [REDACTED] 54. [REDACTED] 55. [REDACTED] 56. [REDACTED] 57. [REDACTED] 58. [REDACTED] 59. [REDACTED] 60. [REDACTED] 61. [REDACTED] 62. [REDACTED] 63. [REDACTED] 64. [REDACTED] 65. [REDACTED] 66. [REDACTED] 67. [REDACTED] 68. [REDACTED] 69. [REDACTED] 70. [REDACTED] 71. [REDACTED] 72. [REDACTED] 73. [REDACTED] 74. [REDACTED] 75. [REDACTED] 76. [REDACTED] 77. [REDACTED] 78. [REDACTED] 79. [REDACTED] 80. [REDACTED] 81. [REDACTED] 82. [REDACTED] 83. [REDACTED] 84. [REDACTED] 85. [REDACTED] 86. [REDACTED] 87. [REDACTED] 88. [REDACTED] 89. [REDACTED] 90. [REDACTED] 91. [REDACTED] 92. [REDACTED] 93. [REDACTED] 94. [REDACTED] 95. [REDACTED] 96. [REDACTED] 97. [REDACTED] 98. [REDACTED] 99. [REDACTED] 100. [REDACTED]

ATTACHMENT A  
STRATIGRAPHIC SOIL BORING LOGS



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: FORMER PLAINWELL, INC. MILL PROPERTY

HOLE DESIGNATION: SB-2016

PROJECT NUMBER: 056394

DATE COMPLETED: March 29, 2012

CLIENT: WEYERHAEUSER COMPANY

DRILLING METHOD: DIRECT PUSH

LOCATION: PLAINWELL, MI

FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 346920.71 EASTING: 12778870.99 GROUND SURFACE	723.2						
	SP-SAND, trace silt, trace fine gravel, fine grained, poorly graded, brown, moist	723.0						
	TOPSOIL	722.4		0-2'-009				75
2	SP-SAND, trace silt, trace fine gravel, fine grained, poorly graded, brown, moist - possible coal fragments at 2.5ft BGS - trace coarse gravel at 3.0ft BGS			10P 2-4'-010		50		75
4	- fine sand seam, light gray at 4.9ft BGS			4-6'-011				7
6	CL-CLAY, trace sand, fine grained, poorly graded, low plasticity, firm, gray, moist	718.2		6-8'-012 2DP		85		12
8	- wet at 8.5ft BGS			8-10'-013				2
10	- clayey sand seam at 9.5ft BGS							
	SP-SAND, with fine gravel, coarse grained, poorly graded, brown, wet	713.4 713.2						
	END OF BOREHOLE @ 10.0ft BGS							
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 056394-05-001.GPJ CRA\_CORP.GDT 5/3/12



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: FORMER PLAINWELL, INC. MILL PROPERTY

HOLE DESIGNATION: SB-2017

PROJECT NUMBER: 056394


DATE COMPLETED: March 29, 2012

CLIENT: WEYERHAEUSER COMPANY

DRILLING METHOD: DIRECT PUSH

LOCATION: PLAINWELL, MI

FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 346901.12 EASTING: 12778876.56 GROUND SURFACE	723.1						
2	SP-SAND, with fine gravel, trace coarse gravel, fine grained sand, poorly graded, light brown, moist	719.6		0-2' -034				7
				10P 2-4' -035		40		15
4	CL-CLAY, trace fine gravel, trace silt, low plasticity, firm, gray, with brown banding - light gray at 5.0ft BGS			4-6' -036				10
6				6-8' -037 20P		75		3.4
8	- dark gray at 7.5ft BGS	713.6 713.1		8-10' -038				4.5
10	SP-SAND, with coarse gravel, coarse grained, poorly graded, brown, wet END OF BOREHOLE @ 10.0ft BGS							
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 056394-05-001.GPJ CRA CORP.GDT 5/3/12





# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: FORMER PLAINWELL, INC. MILL PROPERTY

HOLE DESIGNATION: SB-2018

PROJECT NUMBER: 056394

DATE COMPLETED: March 29, 2012

CLIENT: WEYERHAEUSER COMPANY

DRILLING METHOD: DIRECT PUSH

LOCATION: PLAINWELL, MI

FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 346895.77 EASTING: 12778857.1 GROUND SURFACE	724.7						
	SP-SAND, trace silt, trace coarse gravel, poorly graded, brown, moist			0-2' -024				1.1
	TOPSOIL	723.7 723.5		10P 2-4' -025		30		0.4
2	SP-SAND, trace silt, trace coarse gravel, poorly graded, brown, moist - light brown from 2.0 to 2.5ft BGS - slag, black cinders, brick debris from 3.0 to 4.0ft BGS		2-1/4" BOREHOLE	4-6' -026				0.5
4	- coarse gravel, reddish brown at 5.0ft BGS			6-8' -027 2DP		50		0.7
6			BACKFILLED WITH BENTONITE CHIPS	8-10' -028				1.1
8	- coarse sand, moist at 7.5ft BGS							
10	END OF BOREHOLE @ 10.0ft BGS	714.7						
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 056394-05-001.GPJ CRA CORP.GDT 5/3/12



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: FORMER PLAINWELL, INC. MILL PROPERTY

HOLE DESIGNATION: SB-2019

PROJECT NUMBER: 056394


DATE COMPLETED: March 29, 2012

CLIENT: WEYERHAEUSER COMPANY


DRILLING METHOD: DIRECT PUSH

LOCATION: PLAINWELL, MI

FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	P/D (ppm)
	NORTHING: 346915.16 EASTING: 12778852.89 GROUND SURFACE	725.4						
2	SP-SAND, trace fine and coarse gravel, fine grained sand, poorly graded, brown	723.4		0-2' -014				98
	TOPSOIL	723.2		10P 2-4' -015		70		10
4	SP-SAND, trace fine and coarse gravel, fine grained sand, poorly graded, brown - trace silt, dark brown at 3.0ft BGS - coal fragments, wood debris at 4.5ft BGS	720.4		4-6' -016				35
6	CL-CLAY, trace fine sand, fine grained, poorly graded, low plasticity, light brown, moist	716.4		6-8' -017 2DP		50		3.1
8	- wet at 8.5ft BGS	715.4		8-10' -018				2.9
10	SP-SAND, trace fine and coarse gravel, trace silt, coarse grained sand, brown, wet							
	END OF BOREHOLE @ 10.0ft BGS							
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS 

OVERBURDEN LOG 056394-05-001.GPJ CRA CORP GDT 5/3/12



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: FORMER PLAINWELL, INC. MILL PROPERTY

HOLE DESIGNATION: SB-2020

PROJECT NUMBER: 056394

DATE COMPLETED: March 29, 2012

CLIENT: WEYERHAEUSER COMPANY

DRILLING METHOD: DIRECT PUSH

LOCATION: PLAINWELL, MI

FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 346907.6 EASTING: 12778863.54 GROUND SURFACE	724.6						
	TOPSOIL	724.4						
2	SP-SAND, trace coarse gravel, fine grained sand, poorly graded, light brown			10P		60		
4	CL-CLAY, trace sand, fine grained, poorly graded, low plasticity, firm, gray, moist - fine sand seam, with organics, black at 4.8ft BGS	721.1	2-1/4" BOREHOLE	4-6'-001				0.2
6			BACKFILLED WITH BENTONITE CHIPS	6-8'-002		60		1.0
8	- black at 7.5ft BGS			8-10'-03				1.7
10	- fine sand, poorly graded, light brown at 9.9ft BGS END OF BOREHOLE @ 10.0ft BGS	714.6						
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 056394-05-001.GPJ CRA CORP.GDT 5/3/12



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: FORMER PLAINWELL, INC. MILL PROPERTY

HOLE DESIGNATION: SB-2021

PROJECT NUMBER: 056394

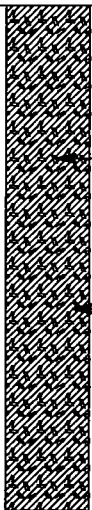
DATE COMPLETED: March 29, 2012

CLIENT: WEYERHAEUSER COMPANY

DRILLING METHOD: DIRECT PUSH

LOCATION: PLAINWELL, MI

FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 346917.81 EASTING: 12778862.08 GROUND SURFACE	724.7						
2	TOPSOIL SP-SAND, trace fine and coarse gravel, fine grained sand, poorly graded, light brown	724.6		0-2' -004/ -004A				3.5
4				10P 2-4' -005	60			2.8
6	CL-CLAY, trace fine sand, trace silt, trace coarse gravel, poorly graded, low plasticity, gray, moist	719.8		4-6' -006				0.7
8	- black at 7.5ft BGS			6-8' -007 2DP	60			0.1
10	END OF BOREHOLE @ 10.0ft BGS	714.7		8-10' -008				0.2
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 056394-05-001.GPJ CRA\_CORP.GDT 5/3/12



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: FORMER PLAINWELL, INC. MILL PROPERTY  
PROJECT NUMBER: 056394  
CLIENT: WEYERHAEUSER COMPANY  
LOCATION: PLAINWELL, MI

HOLE DESIGNATION: SB-2022  
DATE COMPLETED: March 29, 2012  
DRILLING METHOD: DIRECT PUSH  
FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 346911.17 EASTING: 12778873.89 GROUND SURFACE	723.7						
	TOPSOIL	723.2		0-2 -039				2.1
2	SP-SAND, fine to medium grained, poorly graded, light brown - SP-SAND, with silt, trace fine gravel, brown, moist at 2.0ft BGS			10P 2-4 -040	50			6.1
4	CL-CLAY, trace fine gravel, trace fine sand and roots, poorly graded, low plasticity, light gray, moist	720.7	2-1/4" BOREHOLE	4-6 -041				5.0
6			BACKFILLED WITH BENTONITE CHIPS	6-8 -042 2DP	80			0.9
8	- dark gray at 7.5ft BGS			8-10 -043				12.4
10	SP-SAND, fine grained, poorly graded, light brown, wet END OF BOREHOLE @ 10.0ft BGS	713.8 713.7						
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 056394-05-001.GPJ CRA CORP.GDT 5/3/12



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: FORMER PLAINWELL, INC. MILL PROPERTY  
PROJECT NUMBER: 056394  
CLIENT: WEYERHAEUSER COMPANY  
LOCATION: PLAINWELL, MI

HOLE DESIGNATION: SB-2023  
DATE COMPLETED: March 29, 2012  
DRILLING METHOD: DIRECT PUSH  
FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 346898.54 EASTING: 12778868.02	GROUND SURFACE 724.2						
	SP-SAND, trace coarse gravel, fine grained, poorly graded, light brown	723.7		0-2' -029				97
	TOPSOIL	723.2		10P 2-4' -030		70		92
2	SP-SAND, trace coarse gravel, fine grained, poorly graded, light brown							
4	- SP-SAND, fine grained sand, dark gray, moist at 4.0ft BGS	719.7		4-6' -031				35
6	CL-CLAY, trace fine sand, fine grained, poorly graded, low plasticity, firm, gray, moist			6-8' -032 2DP		55		67
8	- trace fine gravel, dark gray at 5.0ft BGS							
	- slag, brick debris at 5.5ft BGS							
	- black clay at 6.0ft BGS							
	- gray clay at 7.0ft BGS			8-10' -033				101
10	END OF BOREHOLE @ 10.0ft BGS	714.2						
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 056394-05-001.GPJ CRA CORP.GDT 5/3/12



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: FORMER PLAINWELL, INC. MILL PROPERTY

HOLE DESIGNATION: SB-2024

PROJECT NUMBER: 056394

DATE COMPLETED: March 29, 2012

CLIENT: WEYERHAEUSER COMPANY

DRILLING METHOD: DIRECT PUSH

LOCATION: PLAINWELL, MI

FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 346905.88 EASTING: 12778855.88 GROUND SURFACE	725.4						
	SP-SAND, trace coarse gravel, fine grained sand, poorly graded, brown, moist			0-2 -019				175
2	TOPSOIL	723.6 723.4		10P 2-4 -020		65		2.5
4	CL-CLAY, trace fine sand, trace coarse gravel, fine grained, low plasticity, light gray - coal fragments at 4.8ft BGS - gray clay seam from 4.9 to 5.0ft BGS - slag, black cinders, brick fragments from 5.0 to 6.0ft BGS - gray, with wood fragments (roots) at 6.0ft BGS	721.4		4-6 -021				1.1
6				6-8 -022 2DP		45		1.9
8	SP-SAND, trace silt, trace coarse and fine gravel, medium grained sand, poorly graded, light brown, wet	717.4		8-10 -023				0.9
10	END OF BOREHOLE @ 10.0ft BGS	715.4						
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 056394-05-001.GPJ CRA CORP.GDT 5/3/12




# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: FORMER PLAINWELL, INC. MILL PROPERTY  
PROJECT NUMBER: 056394  
CLIENT: WEYERHAEUSER COMPANY  
LOCATION: PLAINWELL, MI

HOLE DESIGNATION: SB-2025  
DATE COMPLETED: March 29, 2012  
DRILLING METHOD: DIRECT PUSH  
FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 346886.35 EASTING: 12778859.19 GROUND SURFACE	724.1						
2	SP-SAND, with fine gravel, trace coarse gravel, fine grained, poorly graded, light brown, moist - brown, slag pieces at 1.0ft BGS - light brown at 2.0ft BGS - trace silt, dark brown at 2.5ft BGS - brown at 3.0ft BGS - slag, coal pieces, brick fragments, cinders, sand and clay mixed in from 3.5 to 5.0ft BGS		 2-1/4" BOREHOLE BACKFILLED WITH BENTONITE CHIPS	0-2' -059				35.3
4				10P 2-4' -060		50		7.4
6				4-6' -061				9.4
8	- light brown at 7.5ft BGS - coarse sand, with trace coarse gravel, trace silt, poorly graded, brown, moist at 8.0ft BGS			6-8' -062 2DP		50		16.8
10	END OF BOREHOLE @ 10.0ft BGS	714.1		8-10' -063				8.5
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ☐

OVERBURDEN LOG 056394-05-001.GPJ CRA CORP.GDT 5/3/12





# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: FORMER PLAINWELL, INC. MILL PROPERTY

HOLE DESIGNATION: SB-2026

PROJECT NUMBER: 056394

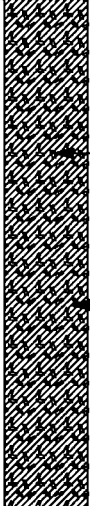
DATE COMPLETED: March 29, 2012

CLIENT: WEYERHAEUSER COMPANY

DRILLING METHOD: DIRECT PUSH

LOCATION: PLAINWELL, MI

FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	P/D (ppm)
	NORTHING: 346924.15 EASTING: 12778849.71 GROUND SURFACE	725.6						
2	SP-SAND, with fine gravel, fine grained sand, poorly graded, brown  - possible coal fragments at 2.5ft BGS		 2-1/4" BOREHOLE  BACKFILLED WITH BENTONITE CHIPS	0-2' -044				0.1
				10P 2-4' -045	60			1.2
4	SM-SILTY SAND, trace fine and coarse gravel, fine grained, poorly graded, dark brown	721.6		4-6' -046				0.7
6	SP-SAND, trace fine gravel, poorly graded, light brown, moist	720.6		6-8' -047 20P	50			0.1
8				8-10' -048				0.6
10	- coarse sand, trace coarse gravel and silt, brown, moist at 9.8ft BGS END OF BOREHOLE @ 10.0ft BGS	715.6						
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 056394-05-001.GPJ CRA CORP.GDT 5/3/12



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: FORMER PLAINWELL, INC. MILL PROPERTY

HOLE DESIGNATION: SB-2027

PROJECT NUMBER: 056394


DATE COMPLETED: March 29, 2012

CLIENT: WEYERHAEUSER COMPANY

DRILLING METHOD: DIRECT PUSH

LOCATION: PLAINWELL, MI

FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 346927 EASTING: 12778859.67 GROUND SURFACE	724.9						
	SP-SAND, with fine gravel, trace roots, fine grained, poorly graded, brown, moist	723.9		0-2' -044				0.9
	TOPSOIL, with roots	722.9		10P 2-4' -045		50		1.0
2	SP-SAND, with fine gravel, trace roots, fine grained, poorly graded, brown, moist							
4	- silt, with sand at 4.5ft BGS			4-6' -046				1.1
6	CL-CLAY, trace fine sand and fine gravel, fine grained, low plasticity, gray, moist	718.9		6-8' -047 20P		50		0.7
8	SP-SAND, with silt, trace coarse gravel, fine grained sand, poorly graded, brown, moist	716.9		8-10' -048				1.3
10	END OF BOREHOLE @ 10.0ft BGS	714.9						
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 056394-05-001.GPJ CRA\_CORP.GDT 5/3/12



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: FORMER PLAINWELL, INC. MILL PROPERTY

HOLE DESIGNATION: SB-2028

PROJECT NUMBER: 056394

DATE COMPLETED: March 29, 2012

CLIENT: WEYERHAEUSER COMPANY

DRILLING METHOD: DIRECT PUSH

LOCATION: PLAINWELL, MI

FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 346929.37 EASTING: 12778869.33 GROUND SURFACE	724.3						
	TOPSOIL	723.8		0-2' -054				1.9
2	SP-SAND, with fine gravel, trace silt, fine grained, poorly graded, brown, moist			10P 2-4' -055	50			1.6
4	SC-CLAYEY SAND, trace fine gravel, fine grained, poorly graded, brown, moist	721.3	2-1/4" BOREHOLE	4-6' -056				1.1
6	CL-CLAY, trace fine gravel, fine grained, low plasticity, firm, gray, moist - trace fine sand at 6.0ft BGS - trace coarse gravel, fine sand, with organics at 6.5ft BGS	719.3	BACKFILLED WITH BENTONITE CHIPS	6-8' -057 20P	80			1.5
8	- black, with organics at 8.0ft BGS			8-10' -058				0.9
10	SP-SAND, trace coarse gravel, coarse grained, poorly graded, light brown, wet END OF BOREHOLE @ 10.0ft BGS	714.5 714.3						
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 056394-05-001.GPJ CRA CORP.GDT 5/3/12



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: FORMER PLAINWELL, INC. MILL PROPERTY

HOLE DESIGNATION: SB-2029

PROJECT NUMBER: 056394


DATE COMPLETED: March 29, 2012

CLIENT: WEYERHAEUSER COMPANY

DRILLING METHOD: DIRECT PUSH

LOCATION: PLAINWELL, MI

FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 346888.8 EASTING: 12778870.67 GROUND SURFACE	723.9						
2	SP-SAND, with fine gravel, trace coarse gravel, fine grained, poorly graded, moist, brown	722.9		0-2' -064				0.9
	SC-CLAYEY SAND, with fine gravel, trace coarse gravel, fine grained, poorly graded, brown, moist	721.4		10P 2-4' -065		50		1.8
4	CL-CLAY, trace coarse gravel, fine grained, poorly graded, low plasticity, firm, gray, moist	720.4		4-6' -066				1.2
	SP-SAND, fine grained, poorly graded, light brown, moist - dark brown to black, organics present at 3.7ft BGS	719.9		6-8' -067 2DP		50		1.1
6	CL-CLAY, trace coarse gravel, fine grained, poorly graded, low plasticity, firm, gray, moist - dark brown at 5.0ft BGS - cinders, slag from 7.5 to 7.7ft BGS - dark gray at 7.7ft BGS			8-10' -068				0.7
10	END OF BOREHOLE @ 10.0ft BGS	713.9						
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 056394-05-001.GPJ CRA\_CORP.GDT 5/3/12



# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: FORMER PLAINWELL, INC. MILL PROPERTY

HOLE DESIGNATION: SB-2030

PROJECT NUMBER: 056394


DATE COMPLETED: March 29, 2012

CLIENT: WEYERHAEUSER COMPANY

DRILLING METHOD: DIRECT PUSH

LOCATION: PLAINWELL, MI

FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft BGS	BOREHOLE	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 346891.73 EASTING: 12778879.13 GROUND SURFACE	722.6						
	TOPSOIL			0-2' -069				6.8
2	SP-SAND, with fine gravel, trace silt, fine grained, poorly graded, brown, moist	720.6	 2-1/4" BOREHOLE  BACKFILLED WITH BENTONITE CHIPS	10P 2-4' -070		40		2.8
4	CL-CLAY, trace sand, fine grained, poorly graded, low plasticity, firm, gray, moist - slag from 5.0 to 5.5ft BGS - dark gray at 5.5ft BGS	718.6		4-6' -071				4.2
6				6-8' -072 2DP		80		5.5
8	- light gray at 7.5ft BGS - wet at 8.5ft BGS			8-10' -073				5.9
10	SP-SAND, with coarse gravel, coarse grained, poorly graded, brown, wet END OF BOREHOLE @ 10.0ft BGS	713.1 712.6						
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 056394-05-001.GPJ CRA\_CORP.GDT 5/3/12

ATTACHMENT B

DATA VALIDATION MEMORANDUM



**CONESTOGA-ROVERS  
& ASSOCIATES**

14496 Sheldon Road, Suite #200

Plymouth, Michigan 48170

Telephone: (734) 453-5123

Fax: (734) 453-5201

www.CRAworld.com


---

## MEMORANDUM

---

TO: Greg Carli

REF. NO.: 56394

FROM: Rawa Fleisher/Paul Wiseman/ah/8/Det 

DATE: May 18, 2012

RE: Data Quality Assessment and Full Validation  
Phase II RI Addendum No. 1 – March, 2012  
Former Plainwell, Inc. Mill Property – Plainwell, Michigan

---

The following details a quality assessment and validation of the analytical data resulting from the March 29, 2012, collection of 73 soil samples and nine (9) quality control samples from the Former Plainwell, Inc. Mill Property Site in Plainwell, Michigan. The sample summary detailing sample identification, sample location, quality control samples, and analytical parameters is presented in Table 1. Sample analysis was completed at ALS Environmental (formerly Columbia Analytical Services) in Kelso, Washington (ALS-K) in accordance with the methodologies presented in Table 2.

The quality control criteria used to assess the data were established by the methods and the quality assurance project plan (QAPP). Application of quality assurance criteria was consistent with following guidance documents:

- i. "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999;

These guidelines are collectively referred to as "NFGs" in this Memorandum.

### Sample Quantitation

The laboratory reported detected concentrations of polychlorinated biphenyls (PCB) laboratory's report limit (RL) but above the laboratory's method detection limit (MDL). The laboratory flagged these sample concentrations with a "J". These concentrations should be qualified as estimated (J) values unless qualified otherwise in this memorandum.

### Sample Preservation and Holding Times

Sample holding time periods and preservation requirements are presented in Table 2.

The samples were prepared and/or analyzed within the specified holding time periods.

The remaining samples were shipped and maintained in accordance with the sample preservation requirements.

Initial Calibration – Organic Analyses

Initial calibration data are used to demonstrate that each instrument is capable of generating acceptable quantitative data. A five point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each over a specific concentration range.

Initial calibration criteria for organic analyses are evaluated against the following criteria:

- i. GC (all compounds using an average for multi-response compounds) – the percent RSD must not exceed 20 percent or a correlation coefficient of 0.995 when linear regression calibration curves are used.

Calibration standards were analyzed at the required frequency and the results met the above criteria for linearity and sensitivity.

Continuing Calibration – Organic Analyses

To ensure that each instrument was capable of producing acceptable quantitative data over the analysis period, continuing calibration standards must be analyzed every 12 hours for GC/MS analyses and every 10 samples by GC. The following criteria are employed to evaluate the continuing calibration data:

- i. GC (all compounds using average for multi-response compounds) – the percent difference between mean initial calibration factor and the continuing calibration factor must not exceed 15 percent; and
- ii. GC (compounds determined by linear regression) – the percent drift between the true value and the continuing calibration value must not exceed 15 percent.

Calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity and linearity of response and sensitivity.

Method Blank Samples

Method blank samples are prepared from a purified sample matrix and are processed concurrently with investigative samples to assess the presence and the magnitude of sample contamination introduced during sample analysis. Method blank samples are analyzed at a minimum frequency of one per analytical batch and target analytes should be non-detect.

The method blank samples did not contain target compounds with concentrations that impacted the investigative samples.

Surrogate Compounds – Organic Analyses

Individual sample performance for organic analyses was monitored by assessing the results of surrogate compound percent recoveries. Surrogate percent recoveries are reviewed against the laboratory developed control limits provided in the analytical report.

The PCB surrogate recoveries could not be measured or evaluated in several samples due to dilutions required to successfully analyze the samples. No qualification of these samples was required. The surrogate recovery acceptance criteria were met for all samples that could be.



### Matrix Spike/Matrix Spike Duplicate Analyses

To assess the long term accuracy and precision of the analytical methods on various matrices, matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and the relative percent difference (RPD) of the concentrations were determined. The organic MS/MSD percent recovery and RPD control limits are established by the laboratory. The inorganic control limits are defined by the methods or the laboratory and the NFG. The samples selected for MS/MSD analysis are identified in Table 1.

The samples that should be qualified due to violation of MS/MSD percent recovery criteria and/or RPD are outlined in Table 3. The MS/MSD percent recoveries could not be measured due in some samples to the dilutions required to successfully analyze the samples. No qualification was required. The MS/MSD percent recoveries and associated RPD acceptance criteria were met in the sample analyses that could be evaluated.

### Laboratory Control Sample

The laboratory control sample (LCS) analyses serve as a monitor of the overall performance in all steps of the sample analysis and are analyzed with each sample batch. The LCS percent recoveries were evaluated against method and laboratory established control limits.

The LCS percent recoveries were within the laboratory control limits or did not warrant qualification, indicating that an acceptable level of overall performance was achieved.

### Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and mass spectra (if applicable) were evaluated according to identification criteria established by the methods. The sample(s) identified in Table 1 were reviewed. The organic compounds reported adhered to the specified identification criteria.

### Target Compound Quantitation

The reported quantitation results and detection limits were checked to ensure results reported were accurate. The sample(s) identified in Table 1 were reviewed. No discrepancies were found between the raw data and the sample results reported by the laboratory.

### Field Quality Assurance/Quality Control

The field quality assurance/quality control consisted of nine (9) field duplicate sample sets.

### Field Duplicate Samples

Overall precision for the sampling event and laboratory procedures was monitored using the results of the field duplicate sample sets. The RPDs associated with these duplicate samples must be less than 100 percent. If the reported concentration in either the investigative sample or its duplicate is less than five times the RL, the evaluation criteria is two times the RL value.

Field Quality Assurance/Quality Control (Continued)

Table 4 presents the RPDs of detected analytes in duplicate sample sets with qualifiers. The data indicate that an adequate level of precision was achieved for the sampling event.

System Performance

System performance between various quality control checks was evaluated to monitor for changes that may have caused the degradation of data quality. No technical problems or chromatographic anomalies were observed which would require qualification of the data.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted.

TABLE 1

**SAMPLE COLLECTION AND ANALYSIS SUMMARY  
PHASE II RI ADDENDUM NO. 1 - MARCH, 2012  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

<i>Sample Identification</i>	<i>Location</i>	<i>Matrix</i>	<i>Initial Sample Depth (ft. bgs)</i>	<i>Final Sample Depth (ft. bgs)</i>	<i>QC Samples</i>	<i>Collection Date (mm/dd/yyyy)</i>	<i>Collection Time (hr:min)</i>	<i>Analysis/Parameters</i>
<b>CRA SDG No. 05-35C</b>	<b>CAS (ALS) No. K1202887</b>							
SO-56394-032912-EB-001	SB-2020	soil	4	6		3/29/2012	10:58:00 AM	TCL PCB
SO-56394-032912-EB-002	SB-2020	soil	6	8		3/29/2012	11:00:00 AM	TCL PCB
SO-56394-032912-EB-004	SB-2021	soil	0	2		3/29/2012	11:02:00 AM	TCL PCB
SO-56394-032912-EB-004A	SB-2021	soil	0	2	FD (-004)	3/29/2012	11:02:00 AM	TCL PCB
SO-56394-032912-EB-005	SB-2021	soil	2	4		3/29/2012	11:20:00 AM	TCL PCB
SO-56394-032912-EB-006	SB-2021	soil	4	6		3/29/2012	11:21:00 AM	TCL PCB
SO-56394-032912-EB-009	SB-2016	soil	0	2		3/29/2012	11:41:00 AM	TCL PCB
SO-56394-032912-EB-010	SB-2016	soil	2	4		3/29/2012	11:42:00 AM	TCL PCB
SO-56394-032912-EB-011	SB-2016	soil	4	6		3/29/2012	11:43:00 AM	TCL PCB
SO-56394-032912-EB-014	SB-2019	soil	0	2		3/29/2012	11:58:00 AM	TCL PCB
SO-56394-032912-EB-015	SB-2019	soil	2	4		3/29/2012	11:59:00 AM	TCL PCB
SO-56394-032912-EB-016	SB-2019	soil	4	6	MS/MSD	3/29/2012	12:00:00 PM	TCL PCB
SO-56394-032912-EB-019	SB-2024	soil	0	2		3/29/2012	12:41:00 PM	TCL PCB
SO-56394-032912-EB-019A	SB-2024	soil	0	2	FD (-019)	3/29/2012	12:41:00 PM	TCL PCB
SO-56394-032912-EB-020	SB-2024	soil	2	4		3/29/2012	12:43:00 PM	TCL PCB
SO-56394-032912-EB-021	SB-2024	soil	4	6		3/29/2012	12:45:00 PM	TCL PCB
SO-56394-032912-EB-024	SB-2018	soil	0	2		3/29/2012	1:00:00 PM	TCL PCB
SO-56394-032912-EB-025	SB-2018	soil	2	4		3/29/2012	1:00:00 PM	TCL PCB
SO-56394-032912-EB-026	SB-2018	soil	4	6		3/29/2012	1:11:00 PM	TCL PCB
SO-56394-032912-EB-029	SB-2023	soil	0	2		3/29/2012	1:12:00 PM	TCL PCB
SO-56394-032912-EB-029A	SB-2023	soil	0	2	FD (-029), MS/MSD	3/29/2012	1:12:00 PM	TCL PCB
SO-56394-032912-EB-030	SB-2023	soil	2	4		3/29/2012	1:41:00 PM	TCL PCB
SO-56394-032912-EB-030A	SB-2023	soil	2	4	FD (-030)	3/29/2012	1:41:00 PM	TCL PCB
SO-56394-032912-EB-031	SB-2023	soil	4	6		3/29/2012	1:42:00 PM	TCL PCB
SO-56394-032912-EB-034	SB-2017	soil	0	2		3/29/2012	1:44:00 PM	TCL PCB
SO-56394-032912-EB-035	SB-2017	soil	2	4		3/29/2012	1:45:00 PM	TCL PCB
SO-56394-032912-EB-036	SB-2017	soil	4	6		3/29/2012	1:46:00 PM	TCL PCB
SO-56394-032912-EB-039	SB-2022	soil	0	2	MS/MSD	3/29/2012	1:52:00 PM	TCL PCB
SO-56394-032912-EB-040	SB-2022	soil	2	4		3/29/2012	1:53:00 PM	TCL PCB
SO-56394-032912-EB-041	SB-2022	soil	4	6		3/29/2012	1:54:00 PM	TCL PCB
<b>CRA SDG No. 05-36C</b>	<b>CAS (ALS) No. K1202934</b>							
SO-56394-032912-EB-003	SB-2020	soil	8	10		3/29/2012	11:02:00 AM	TCL PCB
SO-56394-032912-EB-007	SB-2021	soil	6	8		3/29/2012	11:22:00 AM	TCL PCB
SO-56394-032912-EB-008	SB-2021	soil	8	10		3/29/2012	11:24:00 AM	TCL PCB
SO-56394-032912-EB-012	SB-2016	soil	6	8		3/29/2012	11:44:00 AM	TCL PCB
SO-56394-032912-EB-013	SB-2016	soil	8	10		3/29/2012	11:45:00 AM	TCL PCB

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY  
 PHASE II RI ADDENDUM NO. 1 - MARCH, 2012  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs)	Final Sample Depth (ft. bgs)	QC Samples	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters
CRA SDG No. 05-36C	CAS (ALS) No. K1202934							
SO-56394-032912-EB-017	SB-2019	soil	6	8		3/29/2012	12:01:00 PM	TCL PCB
SO-56394-032912-EB-018	SB-2019	soil	8	10		3/29/2012	12:02:00 PM	TCL PCB
SO-56394-032912-EB-022	SB-2024	soil	6	8		3/29/2012	12:47:00 PM	TCL PCB
SO-56394-032912-EB-023	SB-2024	soil	8	10		3/29/2012	12:48:00 PM	TCL PCB
SO-56394-032912-EB-027	SB-2018	soil	6	8		3/29/2012	1:11:00 PM	TCL PCB
SO-56394-032912-EB-028	SB-2018	soil	8	10		3/29/2012	1:12:00 PM	TCL PCB
SO-56394-032912-EB-032	SB-2023	soil	6	8		3/29/2012	1:43:00 PM	TCL PCB
SO-56394-032912-EB-033	SB-2023	soil	8	10		3/29/2012	1:44:00 PM	TCL PCB
SO-56394-032912-EB-037	SB-2017	soil	6	8		3/29/2012	1:47:00 PM	TCL PCB
SO-56394-032912-EB-037A	SB-2017	soil	6	8	FD (-037)	3/29/2012	1:47:00 PM	TCL PCB
SO-56394-032912-EB-038	SB-2017	soil	8	10		3/29/2012	1:48:00 PM	TCL PCB
SO-56394-032912-EB-038A	SB-2017	soil	8	10	FD (-038), MS/MSD	3/29/2012	1:48:00 PM	TCL PCB
SO-56394-032912-EB-042	SB-2022	soil	6	8		3/29/2012	1:55:00 PM	TCL PCB
SO-56394-032912-EB-043	SB-2022	soil	8	10		3/29/2012	1:56:00 PM	TCL PCB
SO-56394-032912-EB-043A	SB-2022	soil	8	10	FD (-043)	3/29/2012	1:56:00 PM	TCL PCB
SO-56394-032912-EB-044	SB-2026	soil	0	2	MS/MSD	3/29/2012	2:50:00 PM	TCL PCB
SO-56394-032912-EB-045	SB-2026	soil	2	4		3/29/2012	2:51:00 PM	TCL PCB
SO-56394-032912-EB-045A	SB-2026	soil	2	4	FD (-045)	3/29/2012	2:51:00 PM	TCL PCB
SO-56394-032912-EB-046	SB-2026	soil	4	6		3/29/2012	2:52:00 PM	TCL PCB
SO-56394-032912-EB-047	SB-2026	soil	6	8		3/29/2012	2:53:00 PM	TCL PCB
SO-56394-032912-EB-048	SB-2026	soil	8	10		3/29/2012	2:54:00 PM	TCL PCB
SO-56394-032912-EB-049	SB-2027	soil	0	2		3/29/2012	3:05:00 PM	TCL PCB
SO-56394-032912-EB-050	SB-2027	soil	2	4	MS/MSD	3/29/2012	3:06:00 PM	TCL PCB
SO-56394-032912-EB-051	SB-2027	soil	4	6		3/29/2012	3:07:00 PM	TCL PCB
SO-56394-032912-EB-052	SB-2027	soil	6	8		3/29/2012	3:08:00 PM	TCL PCB
SO-56394-032912-EB-052A	SB-2027	soil	6	8	FD (-052)	3/29/2012	3:08:00 PM	TCL PCB
SO-56394-032912-EB-053	SB-2027	soil	8	10		3/29/2012	3:09:00 PM	TCL PCB
SO-56394-032912-EB-054	SB-2028	soil	0	2		3/29/2012	3:11:00 PM	TCL PCB
SO-56394-032912-EB-055	SB-2028	soil	2	4		3/29/2012	3:12:00 PM	TCL PCB
SO-56394-032912-EB-056	SB-2028	soil	4	6		3/29/2012	3:13:00 PM	TCL PCB
SO-56394-032912-EB-057	SB-2028	soil	6	8		3/29/2012	3:14:00 PM	TCL PCB
SO-56394-032912-EB-058	SB-2028	soil	8	10		3/29/2012	3:15:00 PM	TCL PCB
SO-56394-032912-EB-059	SB-2025	soil	0	2		3/29/2012	3:30:00 PM	TCL PCB
SO-56394-032912-EB-060	SB-2025	soil	2	4		3/29/2012	3:31:00 PM	TCL PCB
SO-56394-032912-EB-061	SB-2025	soil	4	6		3/29/2012	3:32:00 PM	TCL PCB
SO-56394-032912-EB-062	SB-2025	soil	6	8		3/29/2012	3:33:00 PM	TCL PCB
SO-56394-032912-EB-063	SB-2025	soil	8	10		3/29/2012	3:34:00 PM	TCL PCB
SO-56394-032912-EB-064	SB-2029	soil	0	2		3/29/2012	3:40:00 PM	TCL PCB

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY  
 PHASE II RI ADDENDUM NO. 1 - MARCH, 2012  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

<i>Sample Identification</i>	<i>Location</i>	<i>Matrix</i>	<i>Initial Sample Depth (ft. bgs)</i>	<i>Final Sample Depth (ft. bgs)</i>	<i>QC Samples</i>	<i>Collection Date (mm/dd/yyyy)</i>	<i>Collection Time (hr:min)</i>	<i>Analysis/Parameters</i>
CRA SDG No. 05-36C	CAS (ALS) No. K1202934							
SO-56394-032912-EB-065	SB-2029	soil	2	4		3/29/2012	3:41:00 PM	TCL PCB
SO-56394-032912-EB-066	SB-2029	soil	4	6		3/29/2012	3:42:00 PM	TCL PCB
SO-56394-032912-EB-067	SB-2029	soil	6	8		3/29/2012	3:43:00 PM	TCL PCB
SO-56394-032912-EB-068	SB-2029	soil	8	10		3/29/2012	3:44:00 PM	TCL PCB
SO-56394-032912-EB-069	SB-2030	soil	0	2		3/29/2012	4:10:00 PM	TCL PCB
SO-56394-032912-EB-070	SB-2030	soil	2	4		3/29/2012	4:11:00 PM	TCL PCB
SO-56394-032912-EB-071	SB-2030	soil	4	6		3/29/2012	4:12:00 PM	TCL PCB
SO-56394-032912-EB-072	SB-2030	soil	6	8		3/29/2012	4:13:00 PM	TCL PCB
SO-56394-032912-EB-073	SB-2030	soil	8	10		3/29/2012	4:14:00 PM	TCL PCB

Notes:

ID - Field Duplicate Sample of sample in parenthesis  
 MS/MSD - Matrix Spike/Matrix Spike Duplicate  
 PCB - Polychlorinated biphenyls  
 QC - Quality Control  
 TCL - Target Compound List

TABLE 2

SUMMARY OF ANALYTICAL METHODS, HOLDING TIME PERIODS, AND PRESERVATIVES  
PHASE II RI ADDENDUM NO. 1 - MARCH, 2012  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN

<i>Parameter</i>	<i>Method</i> <sup>1</sup>	<i>Matrix</i>	<i>Holding Time</i>	<i>Preservation</i> <sup>2</sup>
PCB	SW-846 8082	Soil	- 14 days from sample collection to extraction - 40 days from extraction to completion of analysis	Iced, 4 ± 2° C

Notes

<sup>2</sup> pH preservativation is not required in soil samples.

<sup>1</sup> Method References:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition, and Promulgated updates, November 1986

PCB - Polychlorinated biphenyls

TABLE 3

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO OUTLYING  
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES AND/OR RELATIVE PERCENT DIFFERENCE  
PHASE II RI ADDENDUM NO. 1 - MARCH, 2012  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>MS %Rec</i>	<i>MSD %Rec</i>	<i>RPD</i>	<i>Control Limits</i>		<i>Associated Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
					<i>%Rec</i>	<i>RPD</i>			
PCB	Aroclor-1248	265	185	36	27-128	40	SO-56394-032912-EB-029A	380 J	µg/kg
PCB	Aroclor-1242	334	403	19	27-128	40	SO-56394-032912-EB-038A	63 J	µg/kg
PCB	Aroclor-1248	166	130	25	27-128	40	SO-56394-032912-EB-050	92 J	µg/kg

Notes:

J - Estimated Concentration

MS - Matrix Spike

MSD - Matrix Spike Duplicate

RPD - Relative Percent Difference

%Rec - Percent Recovery

PCB - Polychlorinated biphenyls

TABLE 4

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO VARIABILITY IN FIELD DUPLICATE RESULTS  
 PHASE II RI ADDENDUM NO. 1 - MARCH, 2012  
 FORMER PLAINWELL, INC. MILL PROPERTY  
 PLAINWELL, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Criteria</i>	<i>RPD/ Diff</i>	<i>Sample ID</i>	<i>Qualified Result</i>	<i>Field Duplicate Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
PCB	Aroclor-1254	RPD	170	SO-56394-032912-EB-004	6.9 UJ	SO-56394-032912-EB-004A	72 J	mg/kg
PCB	Aroclor-1242	RPD	130	SO-56394-032912-EB-043	16000 J	SO-56394-032912-EB-043A	3300 J	mg/kg
PCB	Aroclor-1248	RPD	110	SO-56394-032912-EB-019	7.2 UJ	SO-56394-032912-EB-019A	24 J	mg/kg

Notes:

J - Estimated Concentration

RPD - Relative Percent Difference

Diff - Difference

PCB - Polychlorinated biphenyls



ATTACHMENT C

LABORATORY ANALYTICAL DATA